



RESEARCH  
PROGRAM ON  
Forests, Trees and  
Agroforestry

## Mapping institutions that govern Access and Uses of Natural Resources in the Nicaragua-Honduras Sentinel Landscape

*Revealing the complexity, issues, and challenges of natural resource governance*

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## INTRODUCTION

### THE SENTINEL LANDSCAPES INITIATIVE

The Centre for International Forestry Research (CIFOR), the World Agroforestry Centre (ICRAF), the International Centre for Tropical Agriculture (CIAT) and Bioversity, four international research centers and members of the Consultative Group on International Agricultural Research (CGIAR), together with partners have embarked on a major research and development Program on 'Forests, Trees and Agroforestry: Livelihoods, Landscapes and Governance' (hereafter: CRPNo.6) with the clear objective of enhancing the sustainable use of natural resources across sites that illustrate the 'forest transition curve' i.e. from pristine forests to farmlands in which land uses vary from a combination of grassland, annual and perennial crops, and agroforestry production systems (see Figure 1).

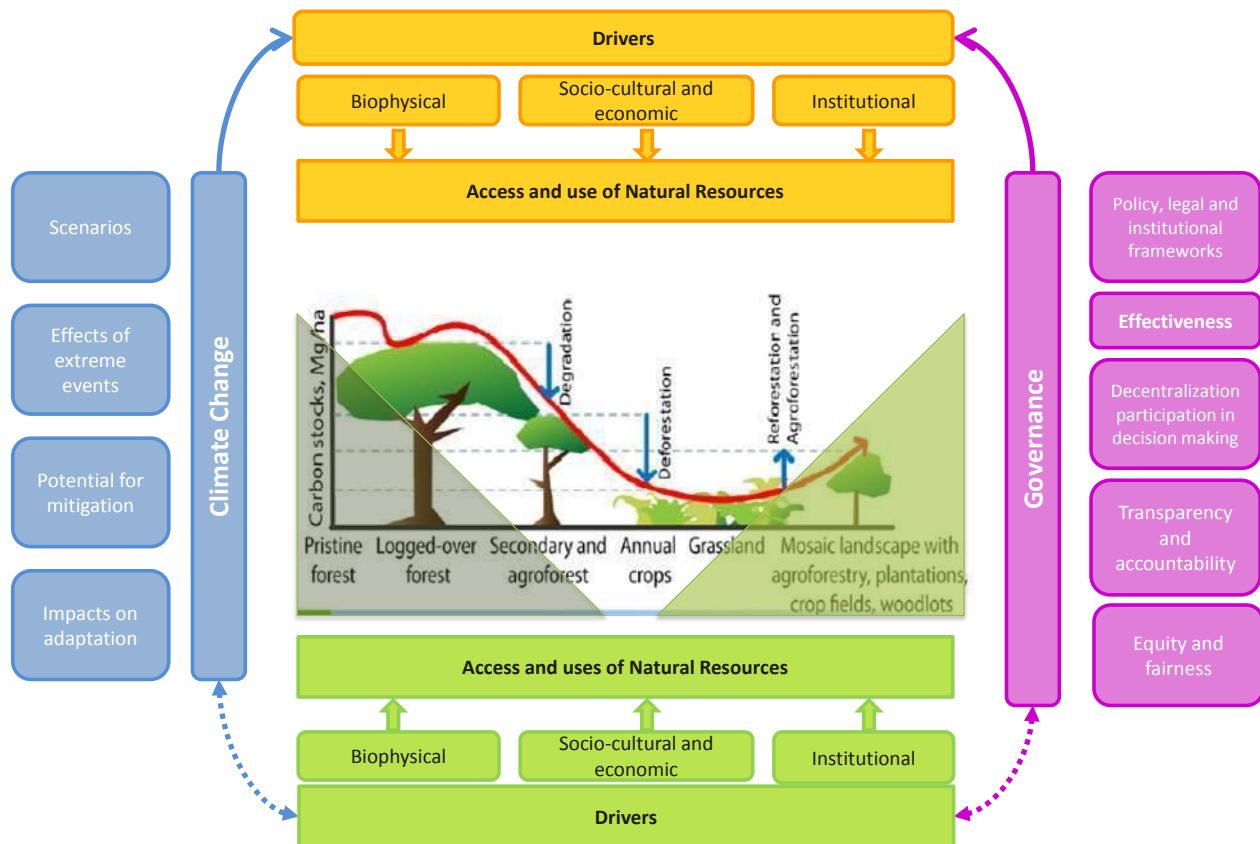


Figure 1 – The 'forest transition curve' and the dimensions addressed in the SL Initiative

Source: adapted from Ordoñez (2012).

To achieve this ambitious goal, a limited number of ‘Sentinel Landscapes’ (hereafter: SL) around the world<sup>1</sup> were considered in which various dimensions (biophysical, socio-economic, and institutional) should be collected, analyzed, and monitored, in order to assess the major drivers of changes in tree cover, and the interactions between tree cover changes and livelihoods. Ideally, research activities in each of the Sentinel Landscapes should combine efforts and provide high quality work in partnership between international centers together with national universities, research centers and institutes.

A Sentinel Landscape in Central America was considered (hereafter: N-H SL) around the centerpieces of the Mesoamerican Biological Corridor (English acronym: MBC) in Nicaragua and Honduras. MBC is a concept of sustainable development for Mesoamerica that unites goals of conservation with the sustainable development initiatives of local peoples throughout the region. Although the MBC has moved away from its original strong focus on a trans-boundary system of protected areas and connecting corridors, to some degree this remains at its heart. It is a cluster of protected areas, stretching from Mexico southeastward through most of the Region<sup>2</sup>. Among the protected areas can be found the Biosphere Reserve of Bosawás in Nicaragua and the Biosphere Reserve of Rio Plátano in Honduras, which are renowned for their rich biodiversity and numerous rare or endangered species, and also home to various indigenous groups (Mayangna/Sumu, Miskitu, Garifuna, Pech and Tawahka), that are at the heart of the Sentinel Landscape in Central America (see Figure 2).

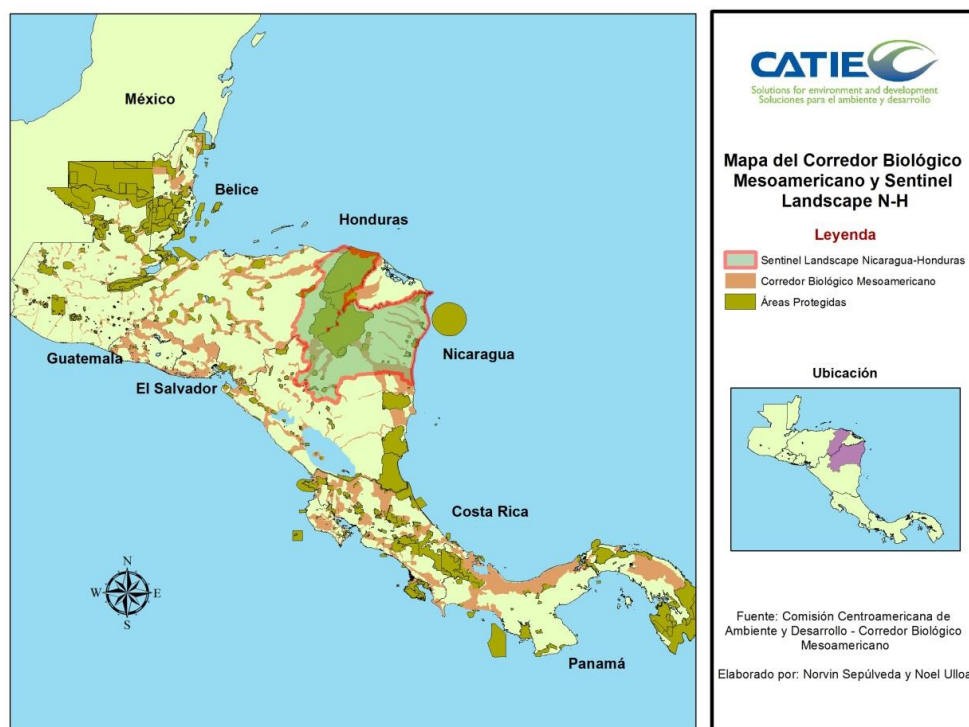


Figure 2 - The Mesoamerican Biological Corridor and the Nicaragua-Honduras Sentinel Landscape

<sup>1</sup> In addition to the N-H SL, there are other ‘geographic landscapes’: (i) Western Ghats SL in South-east India (ii) Northern Mekong SL (China, Laos and ); (iii) Western Africa SL (South-West Burkina Faso/Northern Ghana/North-east Togo), (iv) the Central Africa Humid Tropics transect, which is centered in Cameroon; and (v) Western Amazon SL in South America (Northern-west Peru, Northern region of Bolivia and South-west region of Brazil); and two thematic SL: “Tropical Production Forests observatory” and “Oil Palm” (which includes field sites in Colombia, Peru, Cameroon, Malaysia, Nigeria, and Indonesia).

<sup>2</sup> Belize, Costa Rica, El Salvador, Guatemala, Honduras, México, Nicaragua, and Panamá are involved in the MBC.



Key land uses in the N-H SL include closed primary and secondary forests and farmland where a large diversity of agriculture production systems are developed (including agroforestry based on coffee and cocoa, annual crops, and cattle-raising). The N-H SL exemplifies the dynamics of severe and on-going deforestation and agricultural expansion in a challenging institutional context (see among others: (Kaimowitz, Faune et al. 2003; Hayes 2007; Stocks, McMahan et al. 2007; Larson and Soto 2012).

## MAPPING INSTITUTIONS THAT GOVERN ACCESS AND USES OF NATURAL RESOURCE IN THE N-H SL

Considering the global objective of the initiative, researchers engaged in the SL initiative considered it relevant to map institutions that govern access and uses of natural resources (NR) in order to: (1) understand the institutional settings and the state of governance of NR in the SL; (2) document how institutions of concern operate, in order to illustrate trends in the complexity, issues, and challenges of their functioning; (3) identify and characterize the key stakeholders involved in the governance of NR, and (4) establish a list of measurable indicators that could be used to monitor institutional changes in the Landscapes.

Mapping institutions (or institutional mapping) refers to a methodological approach attempting to conceptualize institutions related to a problematic of concerns in a particular place, at a particular time, and with a particular goal. Among other things, it is intended to produce an analysis of the functioning of institutions and assess the interactions of the key stakeholders engaged in those institutions (Aligica 2006). Institutional mapping contributes to provide an understanding of the 'rules of the games' i.e. of *"where power is located, who has the ability to influence decision-making, and who effectively makes decisions"* (Green 2007). One of its core points is that it enables the identification of the influential and important stakeholders in the institutions of concern that may become future partners to work with, and characterize the bottlenecks that action might help to unlock.

Institutions can be defined as *"humanly devised constraints that structure political, economic and social interactions"* (North 1990). Constraints, as stated by North (ibid), are devised as formal rules (constitutions, laws and regulations, property rights) and informal ones (sanctions, customs, traditions, code of conduct), which usually contribute to the perpetuation of order within a society. As a result, institutions relate to *"shared concepts used by humans in repetitive situations organized by rules, norms, and strategies"* (Ostrom 2007); rules are defined as *"shared prescriptions (must, must not, or may) that are mutually understood and predictably enforced in particular situations by agents responsible for monitoring conduct and for imposing sanctions"*; norms relate to *"shared prescriptions that tend to be enforced by inducements"*; and strategies refer to *"regularized plans that individuals make within the structure of incentives produced by rules, norms, and expectation of the likely behavior of others in a situation affected by relevant physical and material conditions"* (ibid). It is important to recognize that while institutions may operate according to formal rules, outcomes are also shaped by informal rules, norms, and strategies or agencies.

The concept of NR governance does not have a universally, broadly recognized definition. Despite the fact that a number of definitions can be found in the literature, governance of NR relates to the range of political, social, economic and administrative systems that are in place to develop and manage NR, and the delivery of services related to resources at different levels of society. Or put more simply, NR governance is the set of systems that control decision-making with regard to NR development and management in terms of regulating their uses, exploitation, conservation and protection. NR governance covers the manner in which regulatory policies are exercised in the management of NR, broadly embracing the formal and informal institutions by which authority is exercised (Batchelor 2007). NR governance then concerns the function and interplay of institutions in the broadest sense, including social networks and markets as well as state institutions. Governance of NR is usually framed within a *rule of law* such as a Political Constitution which is the highest legal basis that exists in a society), meaning that it is

set under the influence and authority of law within society, especially as a constraint upon behavior, including behavior of state officials.

While governance of NR clearly assesses the capacity of the State to administrate NR, the concept tries to address the way in which decisions are made (i.e. how, by whom, and under what conditions?) than the decisions themselves, including the participation of non-state actors that in one way or another are involved in framing institutions in the form of legitimizing, weakening or influencing decision making and rules that are effectively working (see later). Consequently, there is a profoundly political element to NR governance and as such it usually reflects the political realities at national, provincial/ regional and local levels. As a result, the more general definition of governance (and not only governance of NR) is also contested as those who promote different visions of the future tend to define it in terms which are consistent with their own vision and no other (Green 2007). For instance, Neo-Liberals define 'bad governance' very specifically in terms of the existence of inadequate markets and excessive State control ,while conversely, others (among which we position ourselves) define governance from the perspective of a democratic deficit, defining it therefore in terms of transparency, accountability, fairness, and participation (see Figure 3).

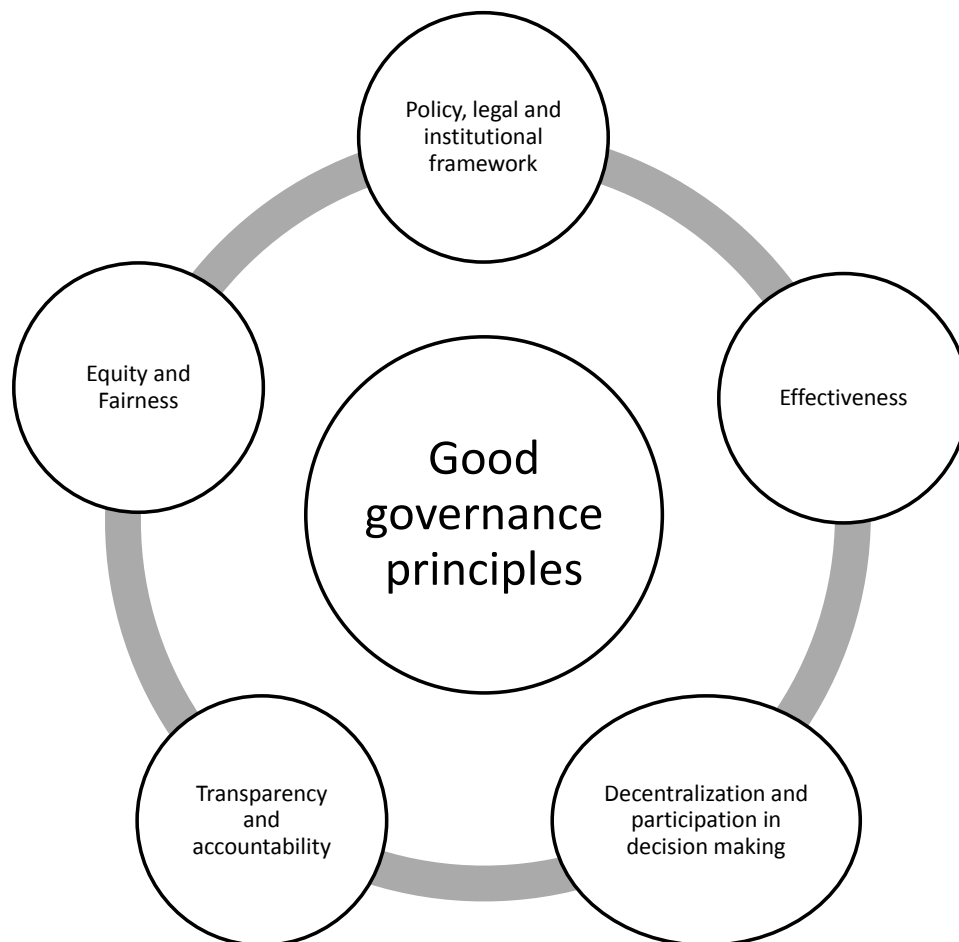


Figure 3 – the five principles of good governance adopted in the Project

Source: authors

As stated above, institutions can be devised as formal or informal, and in the same way, the rules that are framed into institutions, can be enforced or not. These distinctions are important in helping to identify the institutions that may exist, and then in understanding which rules actually have implication for people's behavior. Formal rules are usually issued by a legislative process or formal decree and may be promulgated at the international, national, provincial/regional, or local level. They are generally written documents, in contrast with informal rules that are more likely to be oral and to exist at the community level (even if this is not systematically the case).

However, whether a rule is formal or not has little to do with its implications on people's behavior. The effectiveness of the rules can be captured by another distinction. Rules can be working if they really affect the way people behave towards NR. As defined by Ostrom (Ostrom 1990), working rules (or rules in use) "*are common knowledge and are monitored and enforced. Common knowledge implies that every participant knows the rules, and knows that others know the rules, and knows that they also know that the participant knows the rules*". Working rules may have different sources such as traditional practices (whose value has been verified over time but which were never written down as rules), agreements within a community, ethical or religious beliefs (if these give rise to rules that are monitored and sanctioned), or written legal documents created by governments (that may be adjusted in light of local context). However, one should note that the influence of rules may or may not be what was intended when the rule was elaborated and put into effect. Sometimes formal rules are irrelevant and are simply ignored in a particular situation, and in other cases, formal and informal rules enter into conflict one with another, or people might think the rules don't make sense and aren't fair: the working rule is the one that people follow in practice (Ostrom 1990). In addition, another dimension may influence the effectiveness of rules: what can be called "*the rules of the rulers*" (Green 2007) or the way in which rules are elaborated (i.e. how decision-making occurs) and the participation (or not) of some/all stakeholders in the process.

Stakeholders refer to persons, groups of individuals, or organizations whose interests and activities strongly affect and/or are affected by the issue of concern i.e. those who have a 'stake' in a change and whose support is needed in order to implement the change and/or who control relevant information and resources (Aligica 2006). Stakeholders can be divided into three overlapping groups: (1) the 'rulers' who have the power to make decisions (that are translated for instance into policies or informal rules) and/or to implement them; (2) those, generally, with information, knowledge and/or resources but not always, who can influence decision making; (3) those who are affected by a course of action (Green 2007)<sup>3</sup>. Stakeholders of types 1 and 2 are influential stakeholders that participate (directly or indirectly) in the rules' design and/or implementation, and consequently, can influence behavior toward NR. Influence is the extent to which stakeholders are able to persuade or coerce others into decision-making and/or implementation of actions. Many variables may affect a stakeholder's relative influence: administrative or legal hierarchy (command and control or budget holders); authority of leadership (charisma, political party membership); control of strategic resources, including information or financial resources; possession of specialist knowledge or techniques; and negotiation position (strength in relation to others), etc. Importance refers to the priority given by the rulers to satisfying people needs and interests. Importance is distinct from influence: e.g. some actors upon which a rule places great priority might be considered important, but have a very limited power to influence key decisions that directly affect them, in particular if they do not participate in the decision making process. However, they are important because, at the end of the day, they are those whose behaviors clearly affect the problematic concerned (in the case of the Project, how NR are effectively used).

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<sup>3</sup> Knowing the power that stakeholders have to influence NR Governance will be a critical outcome of the mapping, to be used both to understand institutions and to identify key stakeholders that can possibly be engaged in further research activities or development projects in the landscape.

## A STEP BY STEP RESEARCH PROCESS

There is not a single methodological approach to map institutions. In this regard, the conceptual mapping designed in the Project was conceived as a methodology and proof of concept<sup>4</sup> that ideally could be readjusted and replicated in other SL, according to its feasibility and the results achieved after testing in the field. This situation had a number of consequences at the time of selecting approaches and tools.

### SELECTION OF METHODOLOGICAL APPROACHES

The team conducted an extensive review of theoretical and methodological literature to identify and assess the existing approaches for institutional mapping, in order to then select those which could provide relevant scientific results given the three major structural constraints of the SL initiative: the necessity of obtaining results at a landscape level in a context where most of the SL consist of territories that have a considerable extension (most of them are bi-or tri-national) and that, in addition, feature poor communication infrastructures; the necessity to provide measurable indicators; and the fact that teams applying the methodology might not always involve specialists in institutional mapping.

Taking into consideration these elements, it was not possible to select qualitative approaches that could only be applied at the local level, as this would have required a multiplicity of application to reach the level of the SL, and consequently, unreasonable time, human, and financial resources; it also wasn't possible to select approaches that require the participation of researchers highly specialized in institutional analysis. As a result, the team prioritized methodological approaches mobilizing relatively simple and standardized instruments that could be applied to the field at various levels, including the Landscape. Two methodological approaches appeared to be conducive to meeting these objectives, given the constraints mentioned above: the IAD framework and the FAO-World Bank Framework for Assessing and Monitoring Forest Governance.

### THE IFRI METHODOLOGICAL APPROACH AND ADAPTATION

The Institutional Analysis and Development (IAD) framework aims at examining the use of collective action in the management of 'common pool resources' such as forests, fisheries, grazing lands or irrigation systems, focusing on how human beings interact with ecosystems to maintain long-term sustainable resource yields, and considering the ways that societies have developed diverse institutional arrangements for managing NR; with or without success in avoiding ecosystem collapse (Ostrom 2007; Ostrom 2008).

Based on the IAD framework, the International Forestry Resources and Institutions (IFRI) research program -a global network of research centers that monitor forest conditions at the community-level to better understand the institutional arrangements affecting the long-term management of forest resources-, developed various methods in the early 1990s to set up an empirical basis for assessing and promoting community forest management (Ostrom 2007; Wollenberg, Merino et al. 2007). With the IAD framework providing an overarching set of principles to guide research, IFRI staff developed a standardized protocol (see Figure 4) consisting of eleven survey instruments<sup>5</sup> that should be implemented for a given site defined as a '*forest [of at least] 0.5 ha containing woody vegetation (shrubs, trees, bushes etc.) exploited by three households or more and governed by an overall governance structure*'. The

<sup>4</sup> For that reason, the research team worked in close collaboration with the Method group of the SL initiative.

<sup>5</sup> The instruments combine open-ended questions and questions with pre-selected response options.

protocol aims at facilitating the collection of multidimensional data (ecological, socio-economic and institutional<sup>6</sup> dimensions) in the communities that use those forests.

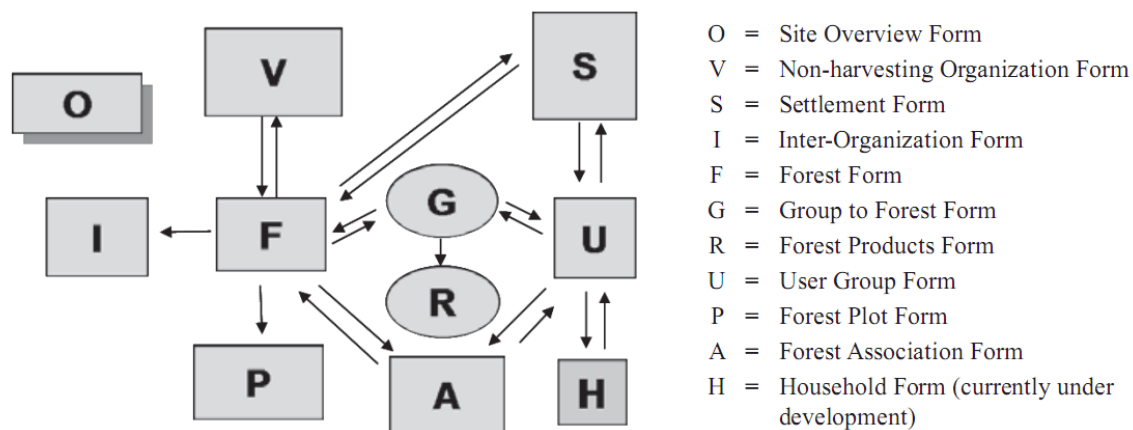


Figure 4 – IFRI's research protocols and their conceptual relationship

Source: Wollenberg et al. (2007)

If the IFRI protocol allows the characterization of institutions *at a forest site level* –which is the centerpiece of the protocol as shown in Figure 4 where the F form has central position, it revealed some challenges for the team in terms of meeting with the objectives of the Project. First, the protocol could not be applied at the level of the Landscape. The application of the IFRI protocol at the landscape level, even in its “light” version, would have implied unrealistic time, human and financial resources, as it would have been necessary to establish a prior sampling of forest sites, statistically representative of all types of situations that can be found in the landscape, which was just impossible to realize. Second, it could not provide ‘easy-to-collect’ measurable indicators of institutional change that could be monitored over the long run for the very same reason. Thirdly, the protocol was designed to examine institutions related to common pool resources: in the N-H SL, NR, even forests are not are not systematically accessed and used under collective rights regimes: while land, forest, water, and minerals are usually owned and accessed collectively in the indigenous communities of the Nicaraguan part of the N-H SL, NR are mostly subject to private rights and used in an individual way (or among the members of a single family) in most of the extension of the N-H SL such as in the Central region of Nicaragua and in most of the Honduran part of the SL. However, seen as the IFRI protocol indeed appeared interesting to enable an analysis of institutions that govern access and uses of NR at the level of sites where NR are ruled commonly, the team decided to keep the methodological approach, and to revise the survey instruments in order to adapt and adjust them to the objectives of the Project.

As a result, the team carried out some adjustments of the survey instruments in order to embrace all types of NR, and not only forests. They also decided to drop the sections in the survey forms dealing with biophysical and ecological information, as there were no specialists in the team on this matter, and as other colleagues in the N-H SL

<sup>6</sup> IFRI define institutions as “rules that constrain human behavior, either by encouraging people to do x or not to do x. The former are commonly called incentives, inducements, and the like. The latter are referred to as sanctions, punishments, or similar terms. Among other things, institutions determine: who is eligible to make decisions in some arenas; what actions are allowed; the rules used to aggregate individual preferences into community-wide rules, decisions, norms, choices, and the like; what information is available to individuals; and the rewards (or payoffs) individuals obtain from collective action”. <http://www.ifriresearch.net/>

were working on these issues in parallel at the same time. Then, the team decided to reorganize the structure of the instrument, mixing questions from different survey forms and designing a guide to realize participatory workshops instead of applying individual interviews.

The revised IFRI forms and guidelines (see Figure 5) were used in the field at the level of two sites (case studies) to document and analyze in-depth the institutions related to the access and use of NR, and consisted of the following:

- A FOREST-SITE form, adapted from the combination of the O, F and I original ‘lite’ IFRI forms (see Figure 4 and the details of full protocol at: <http://www.ifriresearch.net/>), aimed at collecting data about: (1) the socio-historical and geographical characteristics of the site (including its socio-spatial organization, with one or several communities), (2) the forest situation (including its general condition, trends of evolution, and property rights); (3) the working rules regarding access and uses of forest and forest products, (4) the key stakeholders operating in the site, in particular in relation with NR Governance. This form was conceived as a semi-structured survey form to be applied to key informants at the site level (possibly to local leaders of the communities making up the site).
- A COMMUNITY form, adapted from the combination of the S and I original ‘lite’ IFRI forms, aimed at collecting data about: (1) the historical and geographical characteristics of each of the communities of the site; (2) the social and economic characteristics of the community people; (3) the working rules (formal and informal) related to access, uses, and management of NR in the communities, including forest ; (4) the state of conflicts relating to NR, (5) the key stakeholders intervening in the communities in NRM, especially those defined by local people as important actors in terms of the governance of NR. This form was applied to key informants at the community level in each community that is part of the site, in particular local leaders.
- A FOREST ASSOCIATION form, adapted from the A original ‘lite’ IFRI form, aimed at collecting data about: (1) the existence and characteristics of a forest users association; (2) the working rules related to access, use and exploitation of forest and forest products, including those that have been developed and that are implemented by the association itself; (3) the governance structure of the forest association. This form was applied to members of the forest association.
- A guideline to organizing focus groups or participatory workshops, based on the combination of the G, R, U and I original ‘lite’ IFRI forms, aimed at: (1) making a socio-spatial map of each of the communities of the site, (2) mapping important stakeholders from the community members’ standpoint; (3) establishing a list of NR available, their characteristics, importance for community members (using a gendered approach) and local uses; (4) defining the interrelations between the inventory of NR (and their uses) and the socio-spatial map, (5) establishing the characteristics of the working rules for each of the listed NR, and identifying which important/ influential stakeholder(s) played a role in the regulation of each resource’s access and uses. The workshop or focus group was realized with community members that were selected by the local leaders on the basis on their representativeness of the characteristics of the population of each community in terms of age, gender, social status, economic activity, ethnic group, etc., in each of the communities of the site.

All individual survey forms were applied in parallel by the team members, usually before the realization of the focus group with community members.



Animation of the focus group with community members in Sangnilaya



the collective spatial mapping of NR in Sangnilaya



A community member of Sangnilaya presenting the socio-spatial map to others



The *Wihita* of Sangnilaya presenting the key stakeholders engaged in the local decision making related to NR, and explaining who is engaged in what rule in use

Figure 5 – Pictures from the fieldwork in Sangnilaya (SIPBAA Block, Nicaragua)

Sources: @Fréguin-Gresh

## THE FRAMEWORK FOR ASSESSING AND MONITORING FOREST GOVERNANCE AND ITS ADAPTATION

The Framework for Assessing and Monitoring Forest Governance, developed by FAO and the Program on Forests (English acronym: PROFOR)<sup>7</sup> which is managed by the World Bank, provides a tool aimed at assessing and monitoring forest governance using a set of standardized indicators about various aspects of forest governance (some cover general features, some touch on specifics, and some serve as proxies for factors that are difficult to assess directly; but taken as a whole, the indicators examine forest governance broadly). For the sake of this tool, forest governance includes the norms, processes, instruments, people, and organizations that control how people interact with forests, i.e. all the various kinds of institutions governing forests' access and uses. As designed, the protocol is comprehensive as it draws on a broad, internationally developed framework for assessing forest governance; it provides a robust output because it captures systematically the perceptions of stakeholders; and it is practical because its use does not require expertise in governance diagnostics. For the team, one of the main advantages of the PROFOR Framework was that it could overcome some of the challenges presented by the IFRI methodological

<sup>7</sup> <http://profor.info>



approach, in particular in terms of providing a standardized instrument that could at the same time assess the state of NR governance from the perceptions of the interviewees (who should be selected carefully) at the Landscape level, and establish a list of measurable indicators of institutional changes (see Figure 6).

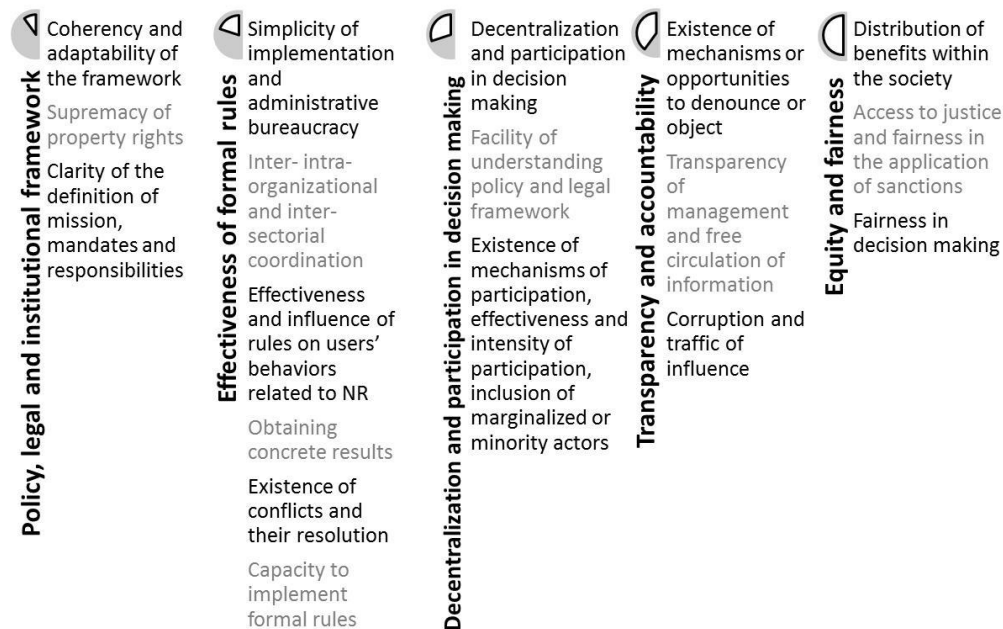


Figure 6 - List of indicators of institutional change established and assessed by the Project at the N-H SL level

Sources: adaptation from the PROFOR Framework

As a result, the PROFOR methodological approach was also selected as a core tool for the institutional mapping, as a complement to the IFRI protocol. However, the team also had to realize some adjustments of the tool. First, the tool was designed to collect data on the interviewees' perceptions of forest governance only, and for the very same reason that the IFRI protocol had been adjusted on the matter and as it was not possible to design a tool that would have been specific for each resource, the team decided to open up the tool with a subjective listing of NR established from each of the interviewee standpoint, with the hypothesis that the establishment of a list and priorities given to the resources would be the guiding principles of the tool. Second, contrary to what the Framework was originally designed for (i.e. organizing a collective workshop), the team decided to use the tool as a survey instrument (hereafter referred to as the NR Governance questionnaire) that was applied to selected representatives of the key stakeholders in NR governance (such as officials from Ministries and Institutes formally in charge of NRM for instance, that were previously identified in the literature review). The questions were also reformulated to explicitly gather perceptions under the hypothesis that the interviewee would be able to share his/her views freely, considering that his/her individual view would not necessarily reflect the views of the organization the interviewee was working for.

Consequently, the methodology designed by the team to map institutions that govern NR access and uses in the N-H SL resulted in a combination of methodological approaches that were implemented in parallel at various levels: landscape, national, provincial/regional, municipal/indigenous territories, and communities, as conceptualized in Figure 7.



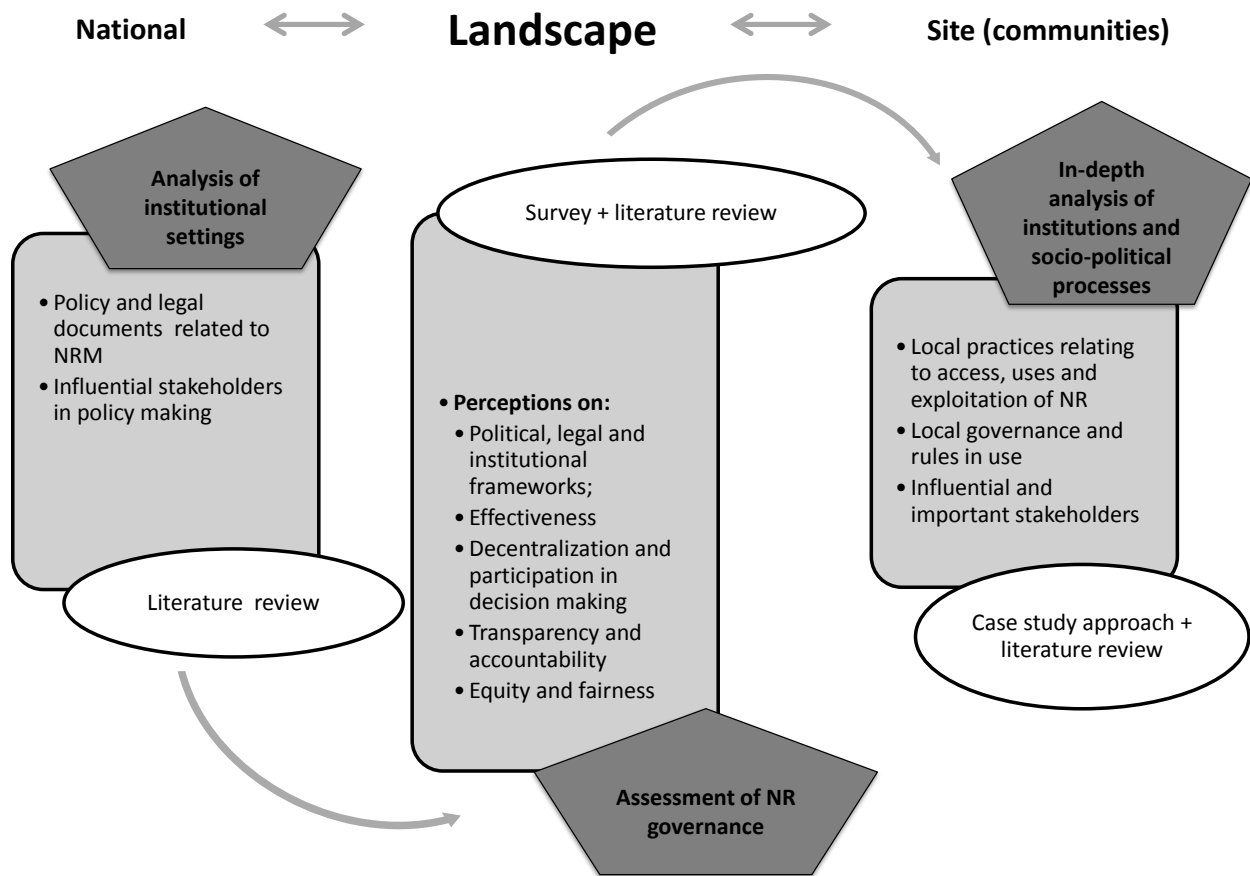


Figure 7 –Data, instruments and methodological approaches used to map institutions in the N-H SL

Sources: authors

## GEOGRAPHICAL SCOPE, AMBITIONS OF THE PROJECT AND ITS LIMITATIONS

According to its original definition, the N-H SL encompasses, in Nicaragua, 18 municipalities: Jinotega, El Cuá, Wiwilí, San José de Bocay (Department of Jinotega); El Tuma-La Dalia, Rancho Grande, San Ramón, Muy Muy and Matiguás (Department of Matagalpa); Wiwilí de Nueva Segovia (Department of Nueva Segovia); Prinzapolka; Rosita, Siuna, Mulukuku, Waslala, Waspan, Puerto Cabezas, and Bonanza (North Atlantic Autonomous Region – Spanish acronym: RAAN); it also encompasses 16 Indigenous Territories in Nicaragua that are found in one or several municipalities: Li Lamni Tabaiska Kum, Kiplan Tani Tasbaika Kum, Wangki Li Aubra, Awas Tingni, Wangki Maya, Wangki Twi-Tasba Raya (in Waspam); Twi Yahbra 22 Tawan -also named Diez Comunidades-, Karata, Twi Waupasa, Tasba Pri (in Puerto Cabezas); Mayangna Sauni As, Matungbak, Tuahka (in Bonanza); Mayangna Sauni Bas -also named Sikilta- (in Siuna); Prinzu Awala, Prinsu Auhya (in Prinzapolka). In Honduras, it encompasses 8 municipalities: Catcamas, Dulce Nombre de Culmí, Patuca (Department of Olancho), Brus Laguna, Juan Francisco Bulnes, Wampusirpi (Department of Gracias a Dios), Trojes (Department of El Paraíso), and Iriona (Department of Colón).

Mapping institutions that govern access and uses of NR in the N-H SL, as elaborated in the Project, was an academic exercise. This mapping, as well as the research in general, aimed at participating in building the tree of knowledge on which all human beings depend; for that reason, it is useful for many. In particular, this research work can help those who are interested in better understanding issues related to NR governance in Nicaragua and Honduras. Mapping institutions that govern access and uses of NR in the N-H SL was, in addition, intended to provide valuable inputs to the global initiative of SL as a proof of methods and concepts. Furthermore, it aimed at contributing to capacity building, as it was conceived and implemented in partnership between international and national researchers from Nicaragua and Honduras, in particular from different indigenous groups that are found in the N-H SL (Miskitu and Mayangna) and other partners from local organizations. Finally, the team hopes that the results of Project might be useful for action. In fact, one of the goals of this institutional mapping was to better identify key partners to work with and bottlenecks that action might help to unlock: based on primary data collection and in-depth analysis, the Project aimed at a better understanding of the 'rules of the game' in order to improve the design of future development projects, in partnership with the key stakeholders identified, either State officials, other development actors, or local leaders, in order to achieve the goals of the CRPNo.6.

The N-H SL is characterized by (1) a large spatial extension (about 68,000 km<sup>2</sup>); (2) a general lack of communication infrastructures (mostly unpaved roads or waterway networks that are only navigable by artisanal boats, entailing lots of time and high costs of travel); and (3) generalized insecurity (in particular in some bordering areas in the northern part of the landscape, both in the RAAN and in the Central Region (Jinotega, Nueva Segovia) and on the south-eastern part of the Honduras side of the landscape). For those reasons, and due to the time, budget and human constraints<sup>8</sup> on conducting the research, it was decided to implement the methodology only in a part of the landscape (see Figure 8).

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<sup>8</sup> The team was formed by permanent staff from CIRAD, Nitlapán and CATIE, and did not sub-contract with interviewers to collect data on the field.

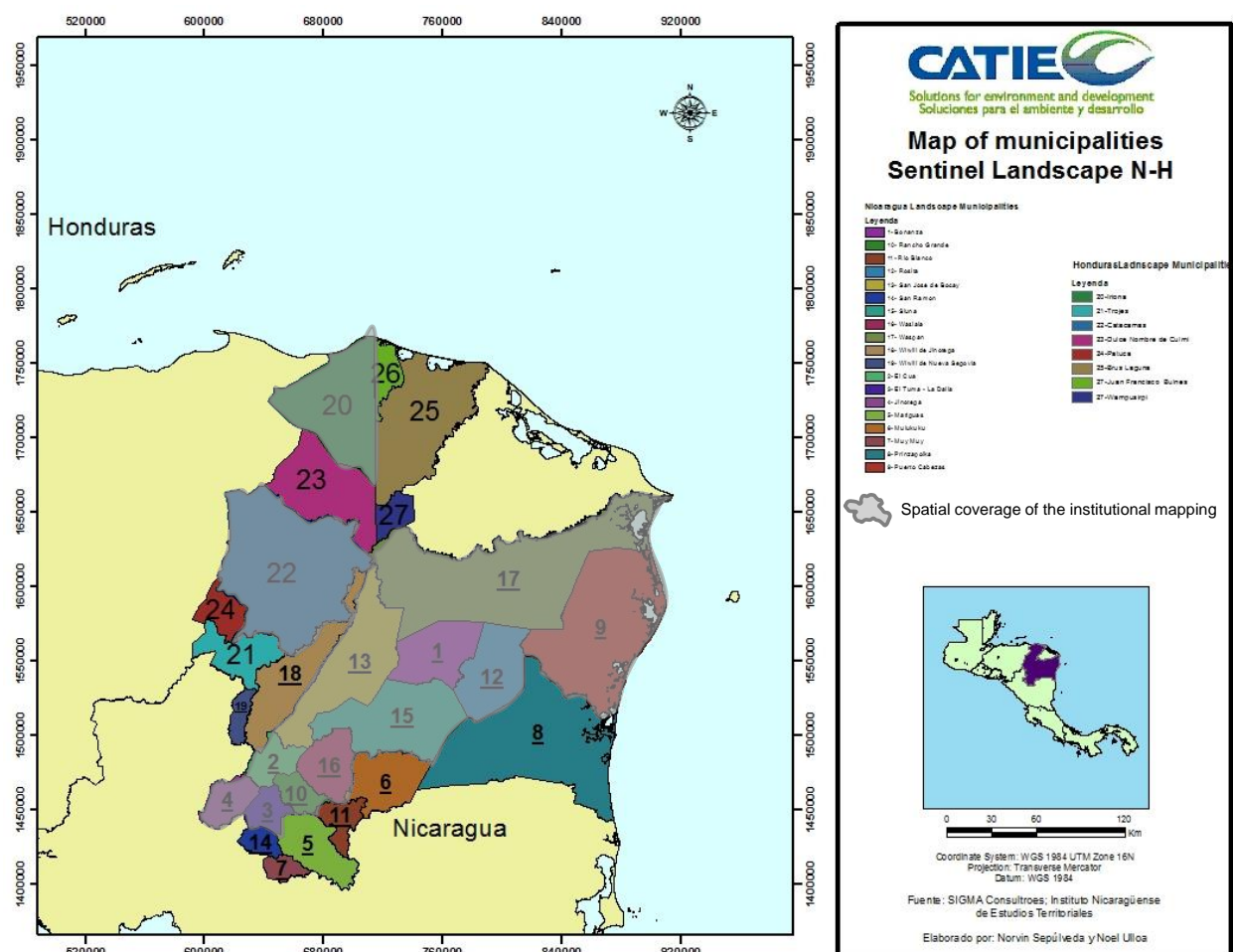


Figure 8 – Scope of the N-H SL and of the institutional mapping

In Nicaragua, the team applied the methodology, combining the different tools which covered four relevant scales in the landscape: at the national; regional/departmental; municipal/territorial level, the adapted PROFOR protocol (i.e. the NR Governance questionnaire) was applied to more than 60 officials of the various state agencies in charge of NRM in Nicaragua at the central level (Managua), in three departments/regions (out of 4 in the SL), 12 municipalities (out of 18)<sup>9</sup>; and six indigenous territories (out of 16)<sup>10</sup>. Most of these municipalities and territories where the Governance questionnaire was applied are part of the Bosawás Biosphere Reserve.

The site selected for the case study in Nicaragua is located in the indigenous Territory of ‘Diez Comunidades’, which is located in the municipality of Puerto Cabezas, about 80Km to the North of the city of Bilwi, in the Northern Atlantic Autonomous Region (Spanish acronym: RAAN). The site corresponds to the SIPBAA Block (see Figure 9), the name SIPBAA referring to the first letters of the names of the six communities which form the Block: Sangnilaya, Iltara, Panua, Butku, Auhya Tara and Auhya Pihny. In that site, the adapted IFRI protocol was applied.

<sup>9</sup> Jinotega, El Cuá, Wiwilí, San José de Bocay; El Tuma-La Dalia, Rancho Grande; Rosita, Siuna, Waslala, Waspam, Puerto Cabezas, and Bonanza

<sup>10</sup> Mayangna Sauni As, Mayangna Sauni Bu, Kipla Sait Tasbaika, Mayangna Sauni Bas (or Sikilta), Li Lamni Tabaiska Kum, and Twi Yahbra 22 Tawan (or Diez Comunidades).

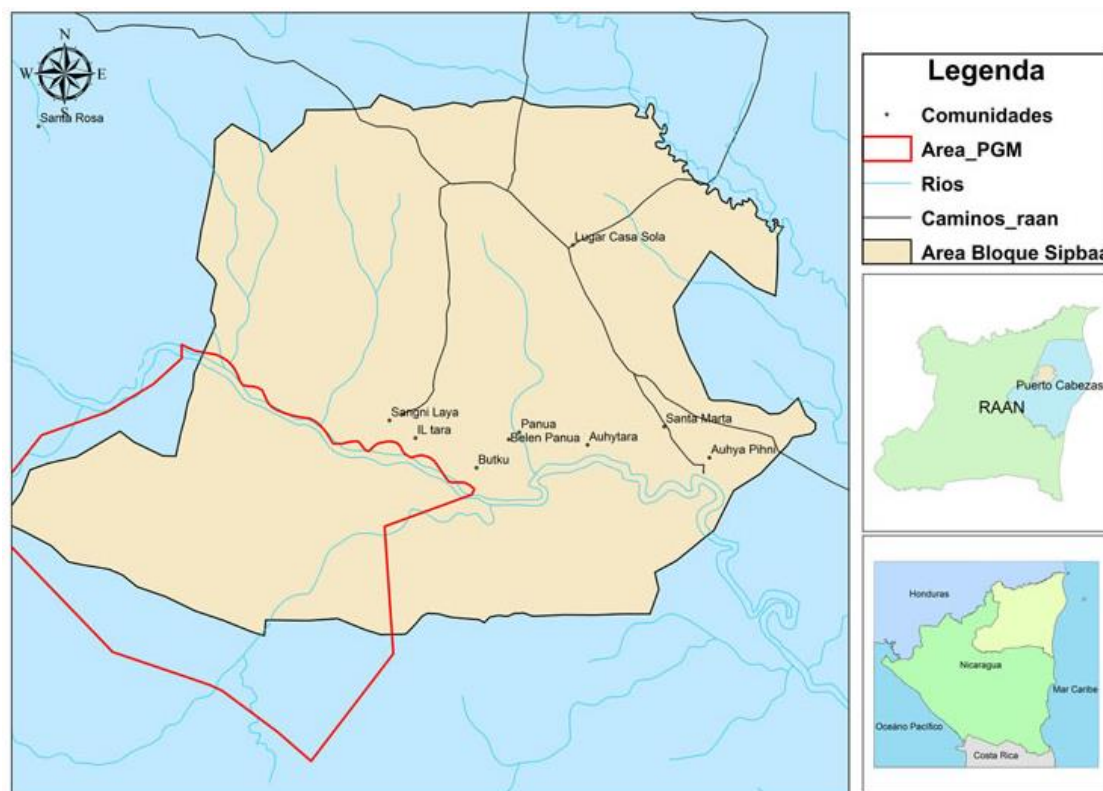


Figure 9 - Map showing the localization of the SIPBAA Block and of the forest under management plan (in red)

Source: von Marschalck (2012)

This site is of great interest for a wide range of factors associated with the governance of NR: (i) a model of local governance including various levels of decision making (national, regional, indigenous territory, communal), (ii) a history of the settlement population, illustrative of tendencies found in miskitu communities of the N-H SL that have been associated with a combination of local (an “enclave economy” and, in the Moskitia during the first half of the 20th century, displacements related to various conflicts that occurred in this century) and national (important armed conflicts in the 1980s, implementation of the agrarian reform) dynamics that have resulted in a population which at the same vindicates its miskitu identity but is marked by an indisputable melting pot; (iii) the coexistence of two types of land tenure (communal and private), that have recently combined with a transfer of rights to a supposedly community-based cooperative, that condition forms of forest exploitation, in particular timber extraction; (iv) the existence of conflicts in the decision-making of NR uses and exploitation, relating to the structure of an organizational model of dialogue which does not have clearly defined grounds in the way in which miskitu communities have been traditionally governed; (v) the permanent threat of forest invasion by outsiders from the Block, essentially mestizo individuals and families, that try to take advantage of the remoteness of the site and the lack of control on NR to settle and illegally set up agricultural fields and pastures.

In Honduras, the NR Governance questionnaire was applied to a selection of representatives of the key stakeholders of the governance of NR at the national level (Tegucigalpa) and in two municipalities (Catacamas and Iriona). A community was selected for case study where the adapted IFRI protocol was applied. The site studied corresponds to the forest of a community called Copén which is located in the Municipality of Iriona in the Department of Colón (Honduras). This site is characterized by its location to the north-west of the Río Plátano Biosphere Reserve, almost adjacent to the buffer zone of this same reserve (see Figure 10).

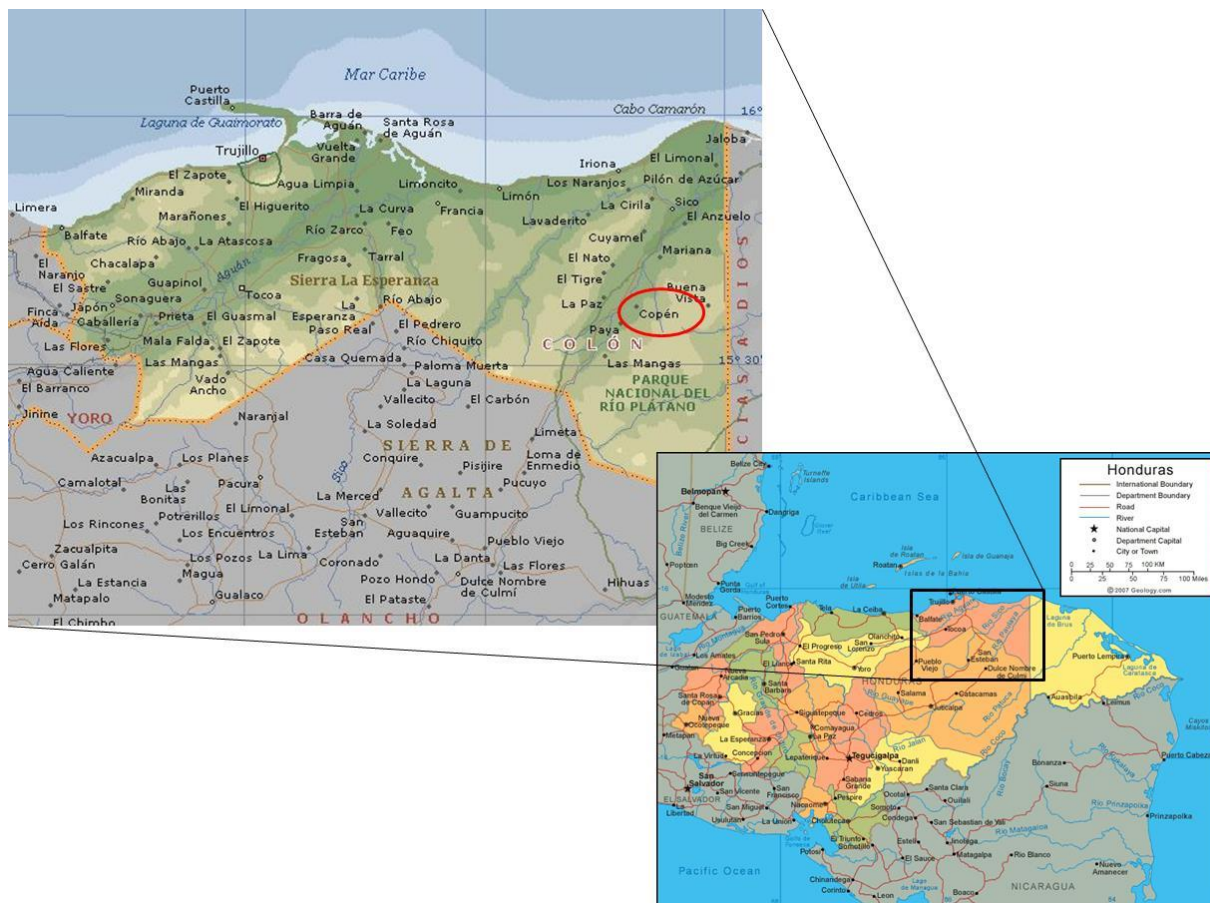


Figure 10 – Map showing the location of the community of Copén in Iriona

This case study was selected because it provides an illustrative example of the conditions and problems faced by the rural communities that live in the Valley of the Sico and Paulaya Rivers: (i) the site corresponds to an area recently settled (less than 40 years old); (ii) The population is predominantly '*mestizo*' and is distributed into small, remote villages; (iii) land tenure in the site is national, but since the second half of the 1990s, the community people have benefitted from agrarian reform concessions and from a State usufruct agreement (provided in the context of the implementation of the Social Forestry System and the application of LDMSA); and (iv) since several decades, community people of the site have participated in various development projects whose general objectives have been oriented towards the promotion of conservation and sustainable management of forests. From various points of view, and in particular from external stakeholders and government agencies, the situation of Copén is considered to be a success in terms of community forest management in the Honduran Mosquitia, since community people, which are supposedly active in the exploitation of timber under certification with a minimal environmental impact<sup>11</sup>, are also locally organized into a local agroforestry cooperative and inserted into a network of regional cooperatives. However, NR in Copén also continue to be threatened by deforestation, illegal logging, and the advancement of the agricultural frontier, which the authorities are unable to control.

<sup>11</sup> It is important to mention that these certified timber production processes have allowed the community to set up a plant for electricity generation.



## RESULTS OF THE INSTITUTIONAL MAPPING IN THE N-H SL

### THE SOCIO-CULTURAL AND HISTORICAL BACKGROUND

The relationships between human beings and nature translate into complex and multifaceted institutions that are framed within a combination of socio-cultural, political, and historical processes. As a result, mapping institutions that govern NR access and uses is to engage with multidimensional themes. A central aspect of this refers to the socio-cultural origins of populations that translate into norms, traditions and other cultural factors that influence the way people relate to nature, and consequently, access and use NR. In the case of the N-H SL, this aspect is crucial as the multicultural and multi-ethnic identity of the population is a thematic that has been associated with decades of the most serious conflicts in the history of Nicaragua and Honduras.

### CULTURAL AND ETHNIC IDENTITIES AND RELATIONSHIPS WITH NATURE

Various waves of populations formed by different groups of indigenous people, each of them with their own culture, values, and norms, have settled in Central America over centuries. Apart from the European, Chinese, Middle-Eastern, and South American originated populations that have colonized the Region in recent times, Central American people can usually be devised into two groups with distinct origins: (1) one group originating from Mesoamerica<sup>12</sup>, with Mayan influence, that had been strongly affected by the Spanish colonization which resulted in a “*strong advance of intermixing [...] despite a strong indigenous presence*” (Pérez Brignoli 2003); and (2) another group, originating “*from the south-west*”<sup>13</sup> (ibid) that had been ‘spared’ from the melting pot (compared to the previous group) until recent times, essentially because of its location and lifestyle within the humid tropics that had remained inaccessible (see Box 1).

However, although the whole population of Central America has indisputably strong indigenous origins, “*a myth of intermixing [‘Mestisaje’ in Spanish] was created as a way of denying the existence of indigenous people in the Pacific, Central, and Northern regions, with the idea [that] the trend towards exclusion and extermination and inferior treatment of indigenous people was heightened, something which is reflected in the different legal frameworks*” (Soto Quirós and Diaz Arias 2007). In this way, the ‘Mestisaje’ which had been particularly strong in the Pacific and Central regions of Nicaragua and Honduras in particular, had resulted in the creation of a population of ‘mestizos’ that have for decades been considered as peasants, excluded from being either Spanish or indigenous, and deprived of rights over NR (Merlet 2002; Mendoza-Vidaurre 2012).

However, the notion of ‘Mestizaje’ is quite complex in Central America, and while it has been one of the central themes in social and anthropological investigations in the Region, the state of being ‘mestizo’ continues to refer to a considerable amount of heterogeneous perspectives and “*a whole apparatus of interpretation of the identity of people, and their classification into this or that group*” (Soto Quirós and Diaz Arias 2007). As a result, and to simplify the debate for the sake of the Project, we differentiated the N-H SL indigenous populations that have maintained various cultural aspects (including local languages and social organizations) and who are mostly found in the Moskitia (Atlantic Coast of Nicaragua and Honduras) from heterogeneous ‘mestizo’ populations that can be basically characterized by the fact that they speak Spanish and are originated from the Pacific and Central regions of both countries.

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<sup>12</sup> Southern Mexico.

<sup>13</sup> Atlantic Coastal regions of Venezuela and Colombia.

### Box 1 – The indigenous and ethnic populations in the N-H SL

In Nicaragua, according to the 2005 Census, indigenous populations are found throughout the national territory: people with Chorotega-Nahua/Mange, Cacaopera/Matagalpa, Ocanxiu/Sutiaba, Nahoa-Nicarao/Náhuatl origins in the Pacific and Central-North Regions; people with Miskitu, Sumu-Mayangna, Rama, Garífuna origins and Afro-descendants/Kriols in the Atlantic Coast of the country. As a result, in the Nicaraguan part of the N-H SL, two<sup>14</sup> groups of populations can be referred to as indigenous people: the Miskitu and the Sumu-Mayangna, who are settled in the South-West of the Landscape (basically the RAAN and the municipality of Bocay, Jinotega), who are usually organized into ‘indigenous communities’ with collective rights of property, and who have been grouped for administrative purposes into Indigenous Territories (see Figure 11) that are mostly either legally demarcated or in the process of becoming so.

According to the 2001 Census, indigenous and ethnic populations, in particular people with Lenca, Miskitu, Cho’rti, Tolupán, Pech, Tawahka, Nahua and Garífuna origins, as well as Afro-descendants, are distributed throughout various departments in Honduras (see Figure 12): in the Honduran part of the N-H SL, one can find people with Miskitu, Pech and Tawahka origins in the department of Gracias a Dios, with Tawahka and Pech origins in Olancho, with Pech origins in Colón and with Tawahka origins in Río Patuca. In contrast with the Nicaraguan part of the Landscape, indigenous people in Honduras are not organized into communities nor demarcated territories. No legislation exists in this respect, although some principles relating to territorial recognition have been defined in ILO Convention No. 169.

Source: (CADPI 2012; CADPI 2012)

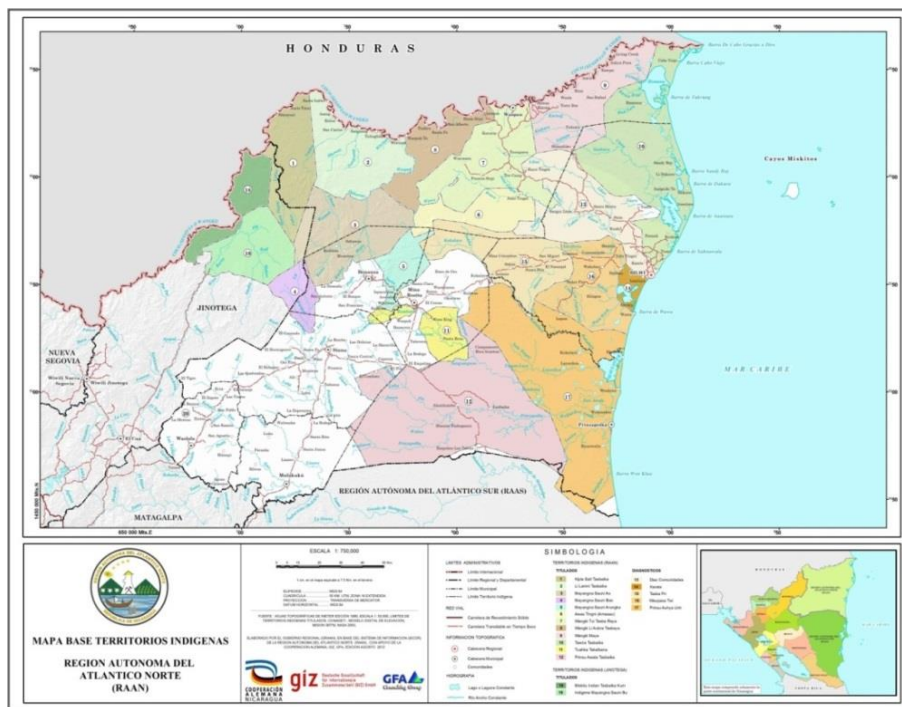


Figure 11 – Demarcation and titling of indigenous territories in Nicaragua

<sup>14</sup> Another group would be formed by the Matagalpa, but their population is diffuse and cannot be clearly located in the Landscape now as they have mixed with mestizo populations.



Figure 12 – Ethnic map of Honduras, <http://www.hondurastips.hn>

It is generally considered that ‘mestizo’ populations have practices relating to NR that differ from those of indigenous people (Hayes 2007; Stocks, McMahan et al. 2007). Accordingly, ‘mestizo’ populations would have developed practices relating to NR “based on the cultivation of corn, beans, chilies and squash” (Pérez Brignoli 2003), combined with cattle breeding, an inheritance of Spanish colonization; they would have developed (or rather been granted) private rights to access resources for the benefit of mostly nuclear families. Contrastingly, indigenous people would have developed practices relating to NR adapted to the “humid tropical ecosystem, combining agriculture with hunting, fishing, and the harvesting of extensive jungle territories, within a dispersed settlement pattern and population densities much lower than in the Mesoamerican zone” (ibid); they would have accessed NR according to common rights, in conformity with their beliefs based on a ‘cosmovision’, in accordance with which people would live in an integral relationship with Mother Earth and her elements, to which the human beings belong, but do not dominate<sup>15</sup>.

Nonetheless, it is obvious that one should not be naïve and create caricatures, in particular given that the question of socio-cultural identity, of the relationships or each group/person with nature, and of the institutions that govern NR access and uses in each society, are so complex and multidimensional, as previously stated. However, at the same time, it is necessary to recognize that the geographical distribution of indigenous and ‘mestizo’ populations, in particular in the N-H SL, coincide with distinct patterns of NR uses.

<sup>15</sup> The concept of accumulation is alien to the indigenous culture and the majority of their languages do not include concepts such as ‘development’, ‘wealth’ or ‘poverty’.



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## HISTORICAL PROCESSES AND PROPERTY RIGHTS OVER NR

Since a long time ago, human beings have organized themselves to better access and use NR in order to satisfy their needs. Appropriation of resources varies in each society according to the relationships developed between people and nature as previously mentioned, but also according to NR availability, the techniques that exist to acquire, use, and to derive profit from NR, as well as the rules that have been designed to regulate NR distribution. Indeed, societies have established systems of rules and rights to regulate behavior toward NR, sanctioning those who do not respect them, elaborating laws, norms or other agreements within the society, within ethical or religious beliefs, thus affecting NR management.

Among forms of institutions regulating access to and uses of NR, land<sup>16</sup> tenure systems “*determine who can use what resources, for how long, and under what conditions*” (FAO 2002). Land tenure systems relate to a central institution that contributes to defining relations between individuals and the biophysical environment in which they are embedded. Analyzing land tenure systems implies the analysis of various features, including:

- The rules and norms (whether formal/informal, legal/illegal/extralegal) that define “*how property rights to land are to be allocated within societies, how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints*” (FAO 2002);
- The rights (or better said, a bundle of rights) over resources: the right to access and use the good, the right to earn income or profit from the resources, the right to transfer them to others, and the right to enforcement of property rights, etc.;
- The holders of the right(s).

One should emphasize the fact that land tenure systems are generally not coherent nor well organized, and often generate contradictions between norms and rules, conflicts between right holders, etc. For that reason, one should define whether analysis of land tenure systems should prioritize what is foreseen in formal regulation or what is actually happening in the field (the practices). Considering those elements and the fact that the objective of the Project was to contribute to documentation of institutions from the perspective of practice, we won't refer to 'property' or 'ownership', but rather we will try to deconstruct the multiplicity of rights and right holders that can actually be found.

Following FAO (2002), land tenure systems are often categorized as:

- Private tenure, in which “*the assignment of rights [is] to a private party who may be an individual, a married couple, a group of people, or a corporate body such as a commercial entity or non-profit organization. For example, within a community, individual families may have exclusive rights to residential parcels, agricultural parcels and certain trees. Other members of the community can be excluded from using these resources without the consent of those who hold the rights*”;
- Common or communal tenure, where “*rights of commons may exist within a community where each member has a right to use independently the holdings of the community*”. For example, in Nicaragua, each of the members of an indigenous community has the right to settle his/her house, cultivate, exploit trees and use other kinds of resources independently in the area corresponding to the jurisdiction of his/her community (non-members of the community are excluded from using the common areas and resources);
- State (in the national domain), where “*property rights are assigned to some authority in the public sector*”. For example, in Honduras, forest lands fall under the mandate of the state (see later)

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<sup>16</sup> In that definition, land also relates to all NR herein.

- Open access, where “*specific rights are not assigned to anyone and no-one can be excluded*” (ibid). However, as stated by Ostrom (Ostrom 2007), open access barely exists.

In Nicaragua, as in Honduras, three types of land tenure are recognized by the Constitutions and the corresponding national laws: private and state tenure in both countries, and common (or communal) tenure in Nicaragua; open-access is not recognized nor does it exist, in Nicaragua or in Honduras.

To understand how property rights are distributed in the N-H SL, it is necessary to familiarize oneself with historical processes, in particular the agrarian policies that have greatly affected the rural sector, and that have been at the origin of serious conflicts that, in some cases, are continuing up until today. As mentioned by IRAM (2000): “*At first glance, reconstructing historical processes may seem to be an academic exercise that is relatively distant from the immediate concerns [...]. However, it is absolutely crucial to understand the essential nature of these substantial debates that feature on the agendas of diverse stakeholders and differentiate the basic from the conjectural*”.

Without going into details, it is possible to highlight some major features of historical processes and agrarian policies in Nicaragua and Honduras (Edouard 2010), including:

- The creation of institutions aiming at allocating, redistributing, and/or managing from the State property rights (to individual and/or groups, in particular cooperatives in both countries, but also indigenous people in Nicaragua) in particular in the context of the implementation of agrarian reforms that had various goals and outputs;
- The policy and legal frameworks have progressively been directed towards the ‘sanctification’ of the private individual absolute right
- In parallel, these frameworks consolidated the superior role of State and public institutions to manage rights in both countries, and in particular in protected areas, creating for instance an ambiguous situation where common rights of indigenous communities are recognized, when at the same time ‘their’ territory is included in Biosphere Reserves and therefore falling under state control and administration (see *below*);
- The implementation of specific public programs to support the creation of community-based organizations and cooperatives, with the particular aim of promoting their productive and commercial capacity, but also to manage resources collectively (in particular land and forests).

As a result however, in both Nicaragua and Honduras, countless conflicts related to rights over NR are found; among others related to: (i) the granting of land under national tenure to individuals or groups without legal documentation; (ii) the granting of land claimed by indigenous people to third parties; (iii) the allocation of municipal land without this land being divided up; (iv) the invasion by third parties of land claimed by indigenous groups, even in demarcated and titled territories; (v) the overlapping of common property rights between different indigenous communities; (vi) the expropriation of land under private tenure without legal procedures and their allocation to beneficiaries of the agrarian reforms without the legal process of awarding titles; (vii) the informal sale of land under common property regime and/or its allocation during the agrarian reforms, etc.

Given that governance of NR is defined in the rule of law (the Political Constitutions and related systems of policies, laws and regulations), it is impossible to map institutions at the Landscape level as a whole, as that would not make sense from an institutional perspective (distinct actors, distinct formal rules, distinct historical processes and rights over NR, etc.). However, the methodological approach designed in the Project permitted the development of the same kind of analysis in both countries (which make them comparable), which included: the characterization of institutional settings at national levels, the assessment of the current state of governance of NR in each country from the key actors' perspectives (the key actors having been identified thanks to the characterization of institutional settings), and an in-depth analysis of local institutions regarding the access and uses of NR at the local level (sites).

### INSTITUTIONAL SETTINGS IN NICARAGUA

Nicaragua has a significant number of formal rules designed to administrate access, use and exploitation of NR. The majority of policies, laws, and regulations have been developed in the course of the 20th century, especially in its final decades (Fréguin-Gresh, Müller-Opoporta et al. 2013; Le Coq, Fréguin-Gresh et al. 2013).

#### *General Policies*

The Constitution of Nicaragua (1987) guarantees the right to land ownership, in particular Article 44 which states that all Nicaraguan people have the right to personal property to ensure themselves the necessary and essential goods for their development. Article 108 guarantees private property to those who use land productively and efficiently. Article 89 recognizes that the indigenous people of the Atlantic Coast have the right to provide their own forms of social organization to administer their local affairs (including access, use and exploitation of NR) in accordance with their traditions, guaranteeing common rights over NR. However, the Constitution also considers that NR are a 'Heritage of the Nation', for which reason the State should administrate their allocation and uses. Indeed, Article 102 states that: *"NR are part of the national heritage. The State is responsible for the preservation of the environment and the conservation, development and rational exploitation of NR; the State may enter into contracts for a sustainable exploitation of these resources, when there is a national interest."*

The Constitution recognizes the rights of the indigenous people to use and to derive profit from common lands and forests, (one should note that it does not recognize full rights over these resources), to organize themselves and to live in the ways which correspond to their traditions (Articles 8, 11, 49, 89, 90, 91, 92, 121, 180, and 181). It also provides that the state is responsible for the management of waters (that are in the Public domain) and recognizes the rights of indigenous people to the use of water on common lands, as it does regarding trees and forests. Finally, the Constitution recognizes that all surface and subsurface minerals are in the national domain, but it also recognize the rights of indigenous people to use and exploit minerals found on common lands.

The Civil code (1904) governs real property and provides the framework for the classification of land tenure types<sup>17</sup>. It also recognizes water as a public good and adds that its regulation depends on the regulatory framework of privately owned land (Barrios and Wheelock 2005).

The Statute of Autonomy of the Atlantic Coast or Law No.28 (1987) and the Law of Communal Property Regime or Law No.445 (2003), in accordance with the Constitution, guarantee the indigenous people and ethnic communities

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<sup>17</sup> Art. 614. states that all lands that are situated within territorial limits and lacking any other owner, belong to the State (Civil Code).

of the Atlantic Coast, Bocay, Coco, Indio and Maize Rivers, the effectiveness of common property. Article 2 of Law No.445 guarantees them *“the full recognition of common property rights over the lands of indigenous and ethnic communities, the possibility to demarcate and title those lands, as well as the use, administration, and exploitation of the NR corresponding to those lands”*. The Autonomy Statute states that autonomy in the Atlantic Coast makes it possible for indigenous and ethnic communities to effectively exercise their common property rights over NR, and to make use of them in order to reinvest the benefits of their exploitation in the Atlantic Coast and the nation’s development. Article 8 recognizes that the Atlantic Coast’s administrative bodies have the faculty *“to promote the rational use of, and profit generation from, common waters, forests, and lands”* for the *“benefit of its inhabitants equitably, by means of the agreements between the Regional Government and the Central government”*; (Article 9) *“within the plans for national development”* (Article 11). Law No.445 also details a procedure by which traditional community authorities can authorize the sale of natural resources to third parties, provided that the Community Assembly approves the sale. Resource extraction also requires community approval or a process of negotiation involving indemnification and community participation. However, Law No.445, by proclaiming *“the full recognition of common property rights”*, appears partly discordant with the Constitution and Law No.28, which only mention the *“rights to use and derive profit from NR”* of the Autonomous Region, which is clearly different and has important implications. Under Law No. 445, indigenous people have common property rights to access, use, derive profit from, manage, and exclude, but not transfer resources.

Based on these regulations, four types of holdings are recognized:

- Private holdings are owned by individuals, firms or groups (like cooperatives) and can be granted by various types of legal documents (including land reform titles); however, by law a private land owner should formally demarcate and register his/her land in the cadaster to benefit from this regime, as stipulated by Law No.509; in Nicaragua, a large amount of private holdings are either not registered or not legalized (see below);
- Community owned lands are recognized by Law No.445, in particular in *“the geographic area in the possession of an indigenous or ethnic community, whether it is under title of absolute ownership (dominium plenum) or not [and where rights apply over resources], comprising lands, sacred places, forest areas”*, among other resources. Law No.445 states that *“communal lands cannot be mortgaged, are inalienable and not attachable”*. However, despite some gains made, the process of demarcation and legalization is still on-going which creates tenure insecurity caused by unresolved conflicts and inadequate documentation;
- National lands are defined as lands that have not been granted either to private holdings or communal tenure. As many holdings and communal lands are not demarcated and/or legalized, it is impossible to assess where national lands are in Nicaragua;
- Municipal land is owned by municipalities which can control their use and the exploitation of resources herein; municipal lands can be leased, but not sold.

However, if the State recognizes one actor (individual or not) as the main land owner, the law never recognizes that land owner as the only rights’ holder. This situation can be illustrated in the case of Bosawás: in the 1990s, a Presidential Decree (1991) established a Natural Reserve called Bosawás. This Reserve was elevated to a Biosphere Reserve in 1997, a decision then ratified by the Government (2001). As stated by Kaimovitz et al (2003) at the time of establishing Bosawás, *“Nicaragua’s central authorities did not really govern the area they had just declared a reserve, probably did not own it, and certainly did not ‘possess’ it in any real sense. A few years earlier, the government handed over much of its authority over the eastern portion of the reserve to a regional government. Theoretically, at least, it had also recognized the rights of indigenous communities living in the area, none of whom were consulted*

*about the decree. Equally importantly, for most practical purposes the national government had little effective control over any of the reserve area."*

## **Land**

The Constitution (1987), as well as the Law of Municipalities or Law No.40 (1988) and its reform (1997), states that the municipalities have political, administrative and financial autonomy, with further capacity to administrate the socioeconomic affairs and the environmental protection and conservation in the territories that fall under their jurisdiction.

The General Law on the Environment and Natural resources, or Law No.217 (1996)<sup>18</sup> and its reform (2008), gives the municipalities the mandate and responsibility for formulating land use management and environmental plans. However, decentralization of authority over land use planning has been slow, in part due to the historical control exercised by centrally-driven public agencies in charge of land allocation and resource management.

Guided by the National Human Development Plan (2012)<sup>19</sup>, the Government developed an sector-wide agricultural strategy called PRORURAL Inclusive<sup>20</sup> that was initially created as a mechanism for coordinating the activities of the state agencies involved in rural development, and for enlisting and harmonizing international support to the sector. At present, PRORURAL is the core policy document of the Government that focuses on agriculture, rural development, and food security. It provides the major programs that bring the productive sector together: agriculture, livestock, forestry, water; climate change as a cross-cutting theme<sup>21</sup>: (1) the National Program on Rural Agroindustry (PNAIR) promoting rural agroprocessing; (2) the National Forest Program (PNF) promoting a sustainable and rational exploitation of trees and forests; and (3) the National Food Program (PNA, better known as Zero Hunger) promoting food production and productive investment in agriculture. PRORURAL also promotes the distribution and sale of agricultural inputs, storage and trade of food and agricultural products. All those programs are clearly focused on small-scale farmers, the poorest and most marginalized people (women, indigenous, afro-descendant, disabled, etc.).

Nicaragua also formulated a National Climate Change Action Plan (Spanish acronym: PANCC) with the objective to develop adaptation measures for the most vulnerable sectors of the economy, among which are agriculture and forestry. The country also developed a Regional Strategy for the RAAN that has recently been approved by the Regional authority (Resolution No. 29-08-02-2012).

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<sup>18</sup> Two important plans regarding NR are the Environmental and Action Plan of Nicaragua (PAA-NIC, 1993) and the Environmental Plans of Nicaragua (PANIC, 2001-05, and 2005-11) that served, among other things, to promulgate Law No. 217.

<sup>19</sup> In 2007, the newly elected Sandinista government withdrew the existing Strategy for Economic Growth and Poverty Reduction (ERCERP) that later formed the basis for the 2008 National Human Development Plan (PNDH) as a "*model of the power of the citizens*". At present, the PNDH is the core policy framework of the government. Its operational goals are economic growth, increased employment and reduced inequality and poverty. The PNDH is organized into four strategic dimensions: (1) the reduction of poverty and inequality; (2) the development of social welfare and equity; (3) the development of forestry with environmental sustainability; (4) the implementation of an Atlantic Coast development strategy. The focus on NR-related policies that used to be directed to conservation of forests has changed to a positive attitude towards the "*care and conservation of Mother Earth and her NR*", taking up as a principle the promotion of a "*rational exploitation of NR*".

<sup>20</sup> PRORURAL was originally initiated under the Bolaños administration (2002-2007), then readjusted and renamed.

<sup>21</sup> It does not include the sectors of tourism and energy, yet according to the need for intersectoral actions, these sectors can be invited to participate in the meetings. Another important mechanism is the Production and Competitiveness Cabinet which consists of all the state agencies and makes decisions related to the roles of the different actors, while taking into account the local stakeholders.

A Law for the Promotion of Agro-ecological and Biological Production (2011) has recently been promulgated and aims at establishing agricultural activities and practices that are environmentally friendly and socially, economically and culturally sustainable.

### *Forests*

The Law of Conservation, Promotion and Sustainable Development of the Forestry Sector or Law No.462 (2003) aims at establishing a legal framework for the conservation, promotion and sustainable development of the forestry sector. The fundamentals are the management of the natural wooded area, the promotion of tree plantations, and the protection, conservation and restoration of forest areas at the national level. The Law created among other things a National System of Forestry Administration (SNAF) and the National Forestry Commission (CONAFOR). The Forest Law provides the organization of forest districts and promotes the development of local forest management plans.

The Law Prohibiting Logging or Law No.585 (2006) banned the export of precious timber if not processed in sawmills authorized for that purpose, although the Presidential Decree No.48 (2007) had allowed the collection of all kinds of trees felled by Hurricane Felix to generate local incomes after the catastrophe. The Law stipulates some rules: among others: exported timber must be less than eight inches thick, regardless of its length, and is subject to a fee assessed on the value of the lumber; requests for permission to cut timber must be accompanied by a forest management plan, and permits are granted on the basis of an operating plan.

The Special Law against environmental and Natural Resources crimes (2005) aims at defining crimes that affect conservation, protection, and rational management of NR, in particular: soil, water and air pollution; manipulation and transportation of toxic, dangerous or polluting substances, etc. The Law specifies the sanctions to be applied (administrative, economic, and up to 4 years of jail). In particular Articles 18-35 refer to crimes against NR such as illegal use of NR, deviation of water sources, various types of fishing techniques, hunting of protected animals, forest fires, illegal tree logging, transportation and trade of illegally cut trees, etc. In these cases, penal sanctions might be applied.

All trees and forests have been declared as a 'Heritage of the Nation', as stated in the Constitution. Consequently, they are subject to national regulation (even in the case of indigenous communities). However, different rules to exploit trees and forests exist, depending of the status of forests and their location:

- The exploitation of natural forests always requires a permit<sup>22</sup>, which is under the responsibility of the forestland owner. The Forest Law does not differentiate rights over forests: the forestland owner *"has domain over the forest with existing over it and its derived benefits, and is responsible for its management, according to what is established by Law"* (Article 2). In Nicaragua, forestland has progressively been privately or commonly held, as it is almost only found in the RAAN where private owners and indigenous communities hold rights<sup>23</sup>. Because private and communal regimes are recognized by the Constitution, the Civil Code, Law No.28 and No.445, tenure systems should formally be secured. However, the slow and incomplete processes of demarcation and legalization of holdings, including in indigenous territories, have

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<sup>22</sup> However, a significant percentage of logging occurs either without a permit, or the activity extends beyond the restrictions of the permit. For example, loggers with permits cut timber outside the area permitted, and commercial permits are granted to locals who are only entitled to receive household permits.

<sup>23</sup> However, situations have been documented in which forestland has also been sold by local leaders and/or granted by the state to non-indigenous people for exploitation. Many of the transactions relating to forestland under common property rights regime are prohibited under the Law No.445, but have been difficult to identify and avoid, creating confusion around rights of access and use of the forest.

provoked multiple and severe conflicts, in particular in forestlands. Furthermore, one should note that it is not because rights can be held by a local authority in indigenous communities that all members of the community effectively and equally access, use, exploit, control or benefit from resources (Larson and Lewis-Mendoza 2011; Larson and Soto 2012). It has occurred that some local authorities of indigenous communities entered into agreements with private firms for forest exploitation without community people's knowledge, participation in negotiations, or approval, and consequently without generating any benefit to them;

- Forestry plantations do not require a permit for their establishment and maintenance, but they must comply with the requirements of registration at the moment of their establishment and exploitation by their owners (in particular to obtain a certification of origin of the product for transportation finalities);
- Forests and trees located in protected areas are always subject to the regulations in this matter. In particular, in protected areas of national domain, tree cutting is prohibited in almost any of its modalities. This situation is a clear example of the contradictions of the Forest law with Laws No.28 and 445. However, specific norms have also been promulgated regarding the forest sector in Bosawás.
- Forest areas of municipal protection are under strict regulations, similar to protected areas.

## **Water**

A National Water Policy was enacted by a Presidential Decree (2001), but its principles have never been fully translated into management practices. Nevertheless, it establishes a number of guiding principles that can be taken up, such as: the recognition of the Dublin principles; the recognition of the fact that water is in the national domain, that it is a strategic resource; that human consumption is the priority use; the adoption of preservation and prevention criteria; the proposition of the development of a water rights system; and the use of polluter-pays and user-pays principles (Novo and Garrido 2010). These principles were subsequently reflected in the General Law on National Water or Law No.620 (2007) that governs the management of waters. The Law incorporates the principles of integrated watershed decentralized management of waters. It is consistent with Law No.40 and No.28 and gives municipalities and indigenous authorities the responsibility for and authority over waters; it also gives some responsibilities to smaller often informal entities through the CAPS (see *below*). Under Law No.620, all Nicaraguan people have the right to water for domestic purposes. The state can grant concessions, licenses, and authorizations for other water uses, including selling rights. The Law provides guidelines for the awarding of rights for periods of 5 up to 30 years. However, water rights are generally not issued: for instance, water for irrigation is often considered an open access resource, without any control. An important way to access potable water in rural areas is through wells, generally built by the State or the projects of external actors (NGOS, international cooperation, etc.).

## **Minerals**

The Special Law on Mines Exploration and Exploitation (2001) governs the mineral sector, in particular the process of granting concessions for mineral exploration and exploitation. The Law provides a mechanism of shared benefits between rights holders in the Autonomous Regions (the indigenous communities, the Regional Council, the municipalities, the National Treasury, and the concessionaire). The bidding and award processes for concessions, and criteria considered, are governed by the Law. The rights granted to a concessionaire should be negotiated in a contract engaging the State and, in the case of indigenous communities, the local authorities, and the concessionaire, and should obtain State authorization. All contracts are registered with the Central Registry of Concessions (2009). Foreign investors are guaranteed the same rights and duties as national investors. Concessionaires must pay a semiannual surface royalty and an extraction royalty. The Law also supports artisanal mining and supposedly permits it to take place within existing concessions (with the agreement of the concessionaire), but the Law states that small-scale and artisanal mining must be registered.

In addition to those national regulations, many sub-national norms exist, such as municipal norms relating NR, municipal environmental plans, Natural reserves' management plans, forest management plans, etc.

### *Rules in use and influential stakeholders in decision making*

However, only some of these rules are properly known and managed by the state agencies, officials and local authorities with mandates and responsibilities related to NR, as presented in Figure 13 and 14 below. During the Governance survey, only 3% of the interviewees recognized that they did not know any national norms (one should note that half (51%) of the interviewees did not know any sub-national norm) and few of them mentioned some. The results also show that formal rules are unevenly known: while 71% of the interviewees mentioned the General Law of Environment and NR and 44% the Forest Law; only 17% mentioned the Law of Municipalities (mostly in the Central North region naturally), and 10 and 12% respectively the Law of communal regime and the Autonomy Statute (mostly, but not only, in the RAAN); and only 19% the Management Plan of Bosawás (while all interviewees at the municipal or indigenous territorial level had mandates in areas included in the Reserve).

**Figure 13 – Formal national-level regulations mentioned in surveys in Nicaragua**

	Frequency	%
Ley 217 - General Law on the Environment and Natural resources (and reform)	42	71%
Ley 462 - Law of Conservation, Fomentation and Sustainable Development of the Forestry Sector	26	44%
Ley 620 - General Law on National Water Policy	16	27%
Ley 40 - Law of Municipalities (and reform)	10	17%
Ley 559 - Special Law against environmental and Natural Resources crimes	9	15%
Ley 585 - Law Prohibiting Logging	9	15%
Ley 407 - the Presidential Decree that establishes and defines Bosawas	8	14%
Ley 445 - Law of Communal Property Regime	7	12%
Ley 28 - Statute of Autonomy of the Atlantic Coast	6	10%
Civil code and Penal code	5	8%
Ley 765 - Law for the Promotion of Agro-ecological and Biological Production	4	7%
Ley 38 - Special Law on Mines Exploration and Exploitation	3	5%
Constitution of Nicaragua	1	2%
Ley 290 - Law for competencies and organization of the Executive power	1	2%
Ley 722 – Special Law on Drinkable water Committees and Sewerage	1	2%
Stakeholders that do not know any national regulation	2	3%

Source: Governance survey



Figure 14 – Formal sub-national level regulations mentioned in surveys in Nicaragua

	Frequency	%
Municipal regulations on Natural Resources	16	27%
Management Plan of Bosawás	11	19%
Local Forest Management Plans	10	17%
Municipal Environmental Plans (PAM)	8	14%
Local technical norms related to Natural Resources	6	10%
Indigenous Territorial Development Plans	6	10%
Municipal Territorial Development Plans (POTEM)	3	5%
Nature Reserve Management Plans	3	5%
Stakeholders that do not know any sub-national regulation	30	51%

Source: Governance survey

In Nicaragua, the policy and legal frameworks relating to NR attribute responsibilities and mandates to many public agencies. But, in order to identify who the real ‘rulers’ are (i.e. influential stakeholders in policy making and implementation), the team decided to utilize the perceptions of the stakeholders who have official mandates in the administration of NR.

For that reason, in Figure 15 we represented the results of the application of the Governance survey that allow identification of those key influential stakeholders for the Nicaraguan part of the Landscape. In Figure 15, the size of the name of each stakeholder reflects the frequency with which its name was mentioned during the Governance survey, which gives an idea of the influence of each actor (from the perceptions of all key actors) in policy making and implementation; the size of the links between stakeholders also reflects the strength (estimated by the frequency of mention by each given actor) of the relations between stakeholders, as perceived by all key actors. This map then allows a representation from the key actors’ perspective of the institutional settings in the Nicaraguan part of the Landscape. However, one should keep in mind that only key actors with mandates and responsibilities in the administration of NR were interviewed, meaning that not all actors (in particular those who may be influential and/or important at the local level, but without any formal mandate) may appear in the Figure.

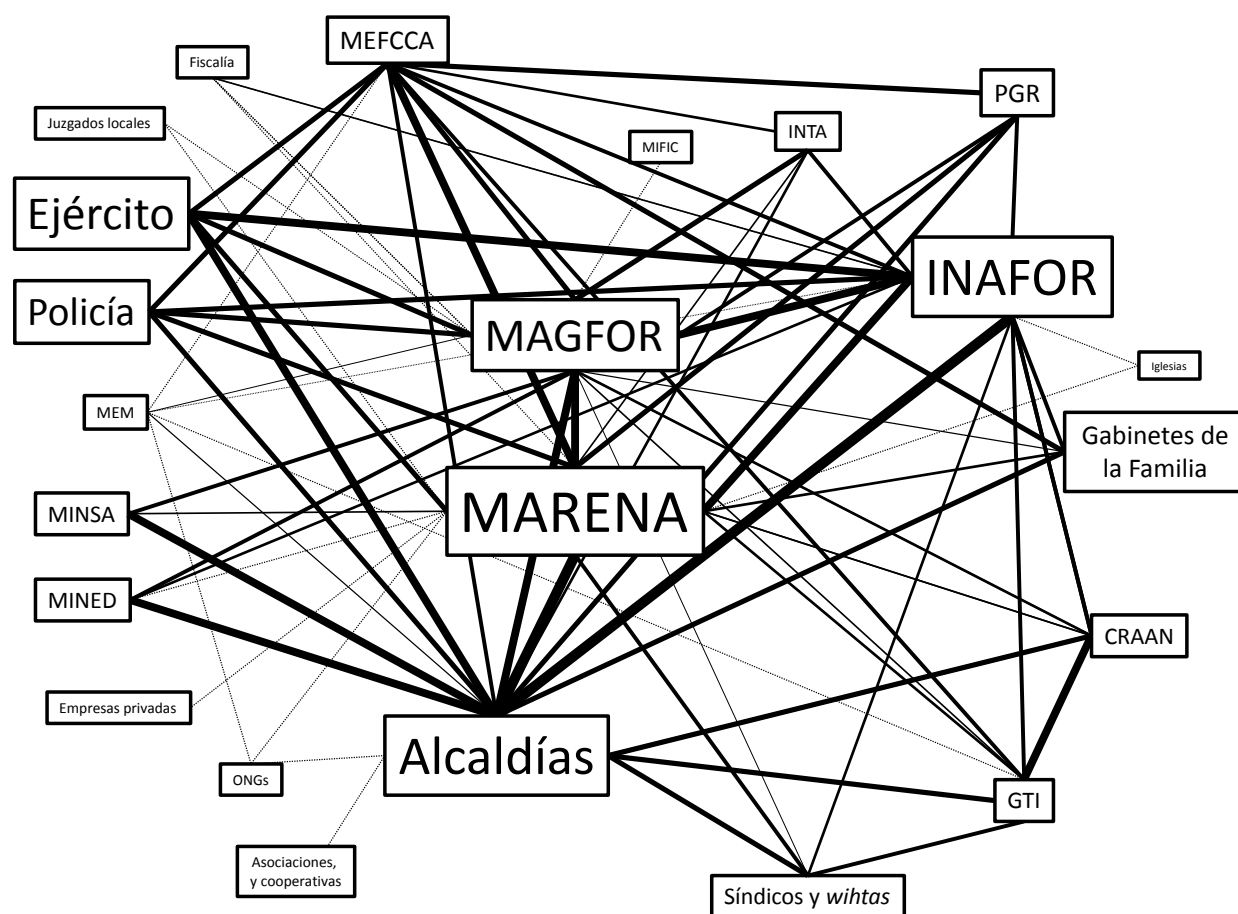


Figure 15 - Map of influential stakeholders in decision-making related to NR administration according to perceptions of key actors in the Nicaraguan side of the SL

Source: Governance survey

First, the Ministry of Natural Resources and the Environment (Spanish acronym: MARENA, <http://marena.gob.ni/>) is the uncontested primary authority by law responsible for the conservation, protection and rational use and exploitation of renewable NR in the country, as stated in Law No.217 among others. From the results of the Governance survey, MARENA confirmed its central position as an influential stakeholder in decision making and policy and implementation of formal regulations. MARENA's functions are the following: formulate, propose and direct the national environmental policy and related laws, and regulations; promote a sustainable use of NR; formulate norms for environmental quality and supervise their achievement; administer a System of Evaluation of Environmental Impacts; guarantee the incorporation of environmental impacts analysis results into municipal plans and programs and into development of policy documents; control pollution and supervise the registration of chemical substances that could affect the environment; administer a National System of Protected Areas (Spanish acronym: SINAP) that operates in all types of Natural Reserves (whether in the public domain or not) including in their respective buffer zones (where mandates and responsibilities that overlap with MAGFOR and MEFCCA can appear, as mentioned in the survey); implement actions for the promotion of a sustainable and rational land use (in coordination with MAGFOR and MEFCCA); implement actions relating to the exploitation of NR in State forest lands (in coordination with MIFIC and MEM); supervise adherence to international agreements in environmental matters; implement actions relating to the exploitation of NR in border territories (in coordination with MINREX); direct and

coordinate public support and actions in the case of natural disasters and environmental contingencies; prevent crimes and offenses against the environment (in coordination with the Public Ministry and the Attorney's General Office); formulate and propose content for environmental education programs (with MINED). MARENA participates in various national and sub-national Commissions, in particular those in charge of environment and water resources management planning. Within MARENA, the Technical Secretariat for Bosawás (Spanish acronym: SETAB) is in charge of the administration of the Biosphere Reserve: SETAB formulates and directs subnational regulations and norms for the management of the Reserve (in particular the Bosawás Management Plan) aiming at promoting a sustainable and rational use of NR and at monitoring and controlling all activities related to the exploitation of resources in the Reserve.

The Ministry for Agriculture and Forests (Spanish acronym: MAGFOR, <http://www.magfor.gob.ni/>) also appears from the interviews as a key stakeholder in the administration of NR in Nicaragua (in particular relating to agriculture and land use, in accordance with the PRORURAL Inclusive policy), even if recently some of its functions were transferred to MEFFCA, with which it is still regularly mixed up. MAGFOR have the following mandates and responsibilities: formulate policies, plans and regulations for the development of agriculture and forestry; identify and prioritize the demand for credit and technological assistance in agricultural and forestry activities; formulate and propose policy on the allocation and use of national lands; formulate and direct programs relating to animal and plant health; administer and supervise the Register of pesticides and toxic and dangerous substances; formulate programs for ecosystem protection, with an emphasis on the conservation of soil and water (in coordination with MARENA and ANA); formulate and propose a zoning in rural areas that allows the establishment of limits for agricultural and forestry development (in coordination with MARENA). MAGFOR is by law responsible for the development and the implementation of environmental protection programs outside of protected areas (even if in that case, tensions may appear with MARENA, in particular in buffer zones). Within MAGFOR, the General Directorate of Agricultural Sector Planning contains an Irrigation Unit that coordinates actions with ANA. MAGFOR also has authority in the forestry sector by means of a hierarchical relation with INAFOR and formulates forestry regulations (in collaboration with CONAFOR). The National Forestry Institute (Spanish acronym: INAFOR <http://www.inafor.gob.ni/>) came in second place in the Governance survey in terms of frequency of citation. INAFOR works through decentralized Forest Districts (10 at national level). It is responsible for the implementation of Forest-related laws, regulations and programs (in particular the PNF and the delivery of tree cutting permits) and the application of the corresponding sanctions (in accordance with Laws No.290 and No.462). INAFOR is in charge of surveillance and inspections in the field. Additionally, INAFOR has the authority to approve and execute local forest management plans, to carry out fire prevention measures, to facilitate wood certification, together with the local authorities.

The Municipal Governments (*Alcaldías* in Spanish) are the third most frequent key stakeholder mentioned, especially in the Central Region (less so in the RAAN, as in that case, GTI and local indigenous leaders share responsibilities). Indeed, under Law No.40 (and its reform), Municipal Governments are responsible at the level of their jurisdiction for the elaboration of land use plans (territorial development plans), environmental plans, in coordination with the Nicaraguan Institute of Municipal Development (INIFOM, <http://www.inifom.gob.ni/>). They have the responsibility to elaborate local norms related to NR management. They have the mandate to develop actions to better ensure that the use and exploitation of NR in their jurisdiction is sustainable and rational. They are involved in the allocation of permits for forest exploitation (in conjunction with INAFOR, except in protected areas), as well as for agreeing on the allocation of rights for forestry and mineral concessions (which in some cases can be problematic, such as in Rancho Grande, where the Municipal Government recently agreed to a concession for a private firm for mineral exploitation, without the support of the local population, as mentioned during the interviews), and for authorizing water permits for irrigation. They are by law in charge of imposing and collecting local taxes related to the use and exploitation of NR (which is unevenly done) and of updating the Cadaster at the municipal level (but as previous research works have shown, this is quite problematic). Within Municipal Governments, various institutions that deal with NR are

found: one of the core ones are the Environmental Management Units (UGAM) that provide support for environmental and territorial management (created by the Decree No.68-2001) and roundtables for consultation and social participation called Municipal Sectoral Working-Committees (created by the Law No.337/2000) amongst which exist Municipal Commissions on the Environment (CAM), on Food Sovereignty and Security (COMUSSAN) and on the Prevention, Mitigation and Attention to Disasters (COMUPRED), all of which operate as forums for promoting coordination and social participation in the municipalities where they have been put in place (which is as per today not generalized).

The Army (*Ejército* in Spanish, <http://www.ejercito.mil.ni/>) was also frequently mentioned as a key stakeholder particularly influential and important in policy implementation in the field. Indeed, among other missions, the Army has the responsibility of contributing to environmental protection at a national level, in particular through actions implemented in coordination with the Municipal Governments (UGAM) and discussed in CAM and COMUPRED, among which the delivery of forest permits, the control of the transport of timber, and the fight against forest fires. Within the Army, the Ecological Battalion for Bosawás<sup>24</sup> develops field actions aimed at the protection and restoration of NR in the Reserve and the fight against NR-related crimes, in coordination with MARENA, INAFOR, and PGR. The Police also appeared to be a key actor due to its responsibility for assisting MARENA, the Municipal and Regional Governments in the protection of the environment (particularly in cases of crimes and offenses against the environment).

Furthermore, other key stakeholders appeared but were mentioned with less frequency in the survey, despite some of them having responsibilities and mandates relating to NR by Law:

The Ministry of the Family, Community, Cooperative and Associative Economy (Spanish acronym: MEFCCA , <http://www.economiafamiliar.gob.ni/>) which coordinates the implementation of PRORURAL Inclusive, with the objective to strengthen “the family, community, cooperative and associative sectors”. Among its functions are the following: design and implement policies, plans and programs (in particular related to PRORURAL Inclusive) aimed at strengthening family- and community-based agriculture, with an emphasis on increasing productivity and agricultural diversification, promoting the transfer of environmental-friendly technologies and practices and offering training and technical assistance to farmers; design and implement programs aimed at the rescue, preservation and promotion of local knowledge; stimulate social participation in decision-making; develop actions in the agricultural sector in coordination with external actors; elaborate and implement plans and programs for the protection and conservation of watersheds either for human consumption, productive use or hydroelectric generating power; promote social responsibility for the protection and conservation of the environment and for the mitigation of the effects of climate change and global warming. MEFCCA is also in charge of promoting actions to stimulate reforestation, social responsibility in the defense of NR, and environmental education programs (in coordination with MINED<sup>25</sup>).

The Attorney’s General Office of the Republic (Spanish acronym: PGR, <http://www.pgr.gob.ni/>) which separated from the Public Ministry in 2001, has a clear mandate and responsibility in the governance of NR, in particular as it includes the National Administration of Property (IP), the Attorney’s Office of Property, and the Attorney’s Office for the Environment and NR. The PGR is responsible for the legal representation of the State in the defense of the rule of law, the fight against corruption, the security of property rights, and the promotion of social control in public administration. The National Administration of Property aims at addressing the administrative issues related to sanitation in indigenous territories, and the demarcation and titling of private holdings (in particular related to agrarian reform). The Unit of the Attorney’s Office of Property is in charge of the representation of the State in issues

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<sup>24</sup> They carry out forest patrols throughout the national territory, prioritizing the main Reserves such as Bosawás.

<sup>25</sup> MINED and MINSA also coordinate the implementation of the program Zero Hunger and the certification of food products

related to national estates and acts in both a legal and administrative manner. It also plays a role in the resolution of conflicts related to land claims in the national domain. The Attorney's Office for the Environment and NR is a specialized branch in charge of promoting administrative, civil or penal actions against individuals or firms that break the law in the case of crimes and offenses against the environment. It also attempts to implement mediation processes to resolve environmental conflicts. The PGR, Police, and Army coordinate on activities related to forest regulations, protection of NR, and the fight against forest fires, among others.

The Regional Council of the Atlantic North (Spanish acronym: CRAAN, <http://www.craan.gob.ni/>) is, by law, one of the key stakeholders in the administration and governance in the RAAN. However, the results of the Governance survey show that from the actors' perspective, although it is the highest authority which leads regional policies and regulations in the RAAN directed at indigenous people of the Region, the CRAAN has little influence on decision making. It has a Regional Secretariat for NR and the Environment (Spanish acronym: SERENA) to administrate and manage NR and the environment in the Region (this agency was barely mentioned during the interviews) and a Forest and Environmental Consultation Committee (Spanish acronym: CCF-A) that supposedly functions as a technical guidance body to ensure the efficient completion of actions defined within the guidelines of the Forest Development Strategy of the RAAN (CCF-A was not mentioned during the survey as a key actor). The National Commission for Demarcation and Titling (CONADETI) is, in accordance with Law No.445, the governing agency of this process, in coordination with the CRAAN. CONADETI is integrated with the officials from the CRAAN, the director of IP, a delegate from MAGFOR, the director of INETER, a representative from each of the indigenous communities, one from the Commission on Ethnic and Indigenous Affairs of the National Assembly, and finally the mayors of the Municipal Governments within the area of demarcation and titling.

The Family, Health and Life Cabinets originate from the Sandinista Defense Committees (CDS) created in the 1980s that were then recreated in 2008 as Citizen Power Councils (CPC) after which they were renamed in 2013 as per today. The Cabinets consist of local and municipal organizations closely linked to the National Sandinista Liberation Front (FSLN), the party of President Ortega's government. Since their creation, a strong controversy has existed around their role and legitimacy. In the Municipalities of the Central-Northern Regions, many actors mentioned them during the survey as key stakeholders influential and important either in local decision making or policy implementation (for instance, it is often members from the Cabinets in rural communities that make technical inspections to allow tree felling permits (supposedly in coordination with INAF and the Municipal Governments and their UGAM). Their mandate is to reinforce links between the State (at various levels) and the population and boost social participation in decision-making, in particular related to protection and conservation of the environment and NR. On the field, they participate in the implementation of various actions in those Municipalities in which the local government is from the FSLN.

The Indigenous Territorial Governments (GTI) were expected to be cited in the survey as influential actors, but the results did not confirm that assumption. By Law No.445, as they represent the indigenous communities, they are the administrative figures at the level of each existing indigenous territory and are made up of legal representatives from the communities that belong to them. In the RAAN (and indigenous territories found in Jinotega and Wiwili), indigenous and ethnic people, as recognized by the Constitution and the Statute of Autonomy, have the rights to organize themselves as per their traditions. Historically, in each indigenous community, the society is organized around a communal assembly, a Judge (or *Wihta*) and a *Síndico*, who are elected. The *Wihta* and the *Síndico* form, together with the elders and other figures of local power (such as the deputy judge, the communal secretary, the representatives for women, health, education, sports, NR, etc.), a Communal Committee or Government. This social organization answers to customary norms derived from the uses and traditions of indigenous peoples, which are legally recognized in the Constitution. One should note that the communal assembly can dismiss the elected authorities at any time, depending on the local circumstances. In general, the Assembly doesn't take minutes,

instead, the shared commitment of the elected and the electorate constitute the legitimacy of the election. The *Wihta* is assigned the role of maintaining order in the community, resolving conflicts (for example in the case of robbery, violence, verbal abuse, witchcraft etc.), collecting and redistributing taxes, organizing the cleaning and maintenance of community infrastructure, organizing the work of the communal Police, giving support to the most vulnerable or for funerals, and interacting with external actors. The *Wihta* has the stamp to make documents official so that they will have validity outside of the community. In the community assembly, the *Wihta* should deliver accountability reports and organize decision-making with consensus (for example, to decide in what to invest taxes). The *Síndico* is responsible for the administration of NR, although, depending on the community there isn't always a *Síndico* present at this level, only at the level of the territory (see the case of SIBPAA). In these cases the *Wihta* holds responsibility for the administration of NR. While indigenous communities have communal property rights, they don't have a title at their level but their rights are recognized at the level of the Territory they belong.

The Public Ministry (<http://www.ministeriopublico.gob.ni/>) was not frequently mentioned during the survey, even though it plays a role in serving the victims of crimes to guarantee them an effective penal prosecution. In NR Governance, it intervenes by means of two specialized units: the Special Unit for Crimes against Real Estate (in cases of confiscation of private or public holdings) and the Special Unit for Crimes against the Environment (see Law No.559) which investigates environmental crimes and offenses. Along with the General Attorney's Office, the Ministry has the mandate to design and validate the policies of prosecution. However, the Ministry, as the PGR, doesn't have a delegation at Municipal level, which limits its ambition.

The National Institute of Agricultural Technology (INTA, <http://www.inta.gob.ni/>) was considered by few interviewees as an important stakeholder: as a decentralized state agency attached to MAGFOR, INTA is involved among other things in providing technical assistance to farmers, with an emphasis on crop varieties, value chains and the development of the Atlantic Coast. It implements programs for the generation and transfer of agricultural technologies, especially agro-ecology and environmental-friendly practices. However, one should recognize that its role remains limited, in particular as INTA has very few functionaries at the national level, which obviously have little presence in the field.

The Ministry of Energy and Mining (MEM <http://www.mem.gob.ni/>) was barely mentioned in the survey. However, this state agency has, amongst other things, the responsibility for formulating and implementing the policies of the Energy and Mineral sectors, as well as directing the administration of State companies that operate in those sectors. Along with MIFIC, it is responsible for the granting of mining concessions in agreement with Municipal Governments, or GTI, in accordance with the delivery of an environmental permit from MARENA<sup>26</sup>.

The Ministry of Development, Industry and Trade (MIFIC, <http://www.mific.gob.ni/>) was barely mentioned either. Among its functions are the following: promote access to external markets and integration into the international economy; support the private sector to exploit market opportunities, promote and facilitate investment in the national economy; administer the Register of Industrial and Intellectual Property; encourage industrial productivity, efficiency and competitiveness. MIFIC encompasses an Environmental Management Unit that manages the administration of forestry incentives (exemption from taxes and management plans), and the implementation of an environmental management system for firms. In coordination with MEM, it is charged with the administration of national forestlands and in particular the granting of concessions or exploitation permits on those lands. In the case of national forestlands in the Atlantic Coast, the granting of a concession also needs to be approved by CRAAN, the GTI and the indigenous authorities.

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<sup>26</sup> However, it is recognized that mining concessions have been granted in protected areas that have neither a system of geo-location nor, for the majority, an environmental management plan.

The Ministry of Health (MINSA, <http://www.minsa.gob.ni/>) is the body responsible for policies in the area of social health and is in charge of, amongst other areas, the quality of water supplied by INAA and wastewater discharges.

The Ministry of Education (MINED, <http://www.mined.gob.ni/>) has the responsibility of administering the system of primary and secondary education. It promotes environmental education initiatives.

Aside from the aforementioned key actors, other stakeholders have, by law, a supposed role in NR governance but weren't mentioned in the survey:

- The National Water Authority (ANA, <http://www.ana.gob.ni/>) is the state agency responsible by law for the development and implementation of the regulations related to water. Since Law No.620 came into place, the ANA has been declared responsible for procedures related to water permits delivery. It also has the mandate to resolve conflicts between water users. However, for various reasons, the ANA is not fully functioning and its role has remained limited.
- At the very local level (communities), the Committees for Potable Water and Sanitation (CAPS) are responsible for administering and managing drinking water systems and the infrastructures that do not have a legal status.
- The Social Investment Emergency Fund (Nuevo FISE, <http://www.fise.gob.ni/>) provides financing for infrastructure and supports local communities in terms of managing said infrastructure. In the water and sanitation sector, since 2005 FISE has been the de facto governing body for rural areas.

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## INSTITUTIONAL SETTINGS IN HONDURAS

Honduras embodies a number of important policies, laws and formal regulations to manage the access, use and exploitation of NR countrywide.

### *General Policies*

The Constitution (1982) guarantees real property rights. It sets up restrictions for foreigners buying property (Article 73). Article 340 declares that the exploitation of NR should be according to public need and utility and that the security of property rights is subject to the social interest: *“the technical operation and rational use of the NR of the Nation [is useful and of public need]. The State regulates their use, according to the social interest, and determines the conditions of their allocation to individuals. The reforestation and conservation of forests are declared of national convenience and collective interest.”* Article 431 stipulates that the *“law may set restrictions, modalities or prohibitions for the acquisition, transfer, use and benefit from state and municipal estates for reasons of public order and social interest of national convenience”*. The Constitution entrusts the State with the power to regulate how NR are allocated and used in order to protect both individual and national interests. Article 346 also recognizes *“measures to protect the rights and interests of indigenous communities in the country, especially related to land and forests where they settled”*; this statement is the only formal mention of such rights for indigenous people in the entire Honduran legal framework. Article 12 defines that the State has rights over underground resources and owns all minerals, petroleum, hydrocarbon and gas deposits within its territory. Consequently, all mining activities should be regulated by law.

The Civil Code, which was recently revised (2011), allows for real property purchase, acquisition, donation, use, rent, mortgage, lien and legal protection.



## Land

The Law for Agrarian Reform (1974) distinguishes public and private property rights (Articles 6, 12 and 23), the latter including *“original property, marginal lands, and land grants from the Spanish Crown that belong to the state because they are within territorial limits and do not have an owner”* (Article 618 of the Civil Code). It also refers to various types of land tenure and specifies that both public and private holdings that are not being used in harmony with the social interest, as defined by the Constitution, can be affected by the agrarian reform and subject to redistribution. According to Article 348 and 349, some principles are stipulated regarding expulsion.

The Law for the Modernization and Development of the Agricultural Sector (1992), also known by its Spanish acronym LMDSA, introduces measures aimed at boosting land markets, simplifying expropriation and restricting land invasion. LMDSA reforms certain aspects of the Agrarian Reform Law, affecting farmers’ access to land. The clause referring to indirect (leasing) or deficient usage as a cause for expulsion was eliminated and a limitation on time for fallow land has been set for 2 years. LMDSA defines that any properties can be bought by the state, establishes that holdings with a maximum of 200 ha can be titled, and allows the titling of parcels of land 1Ha or larger, while previous legislation had required they be at least 5Ha to be titled. LMDSA allows women to receive land titles in their own names, a possibility previously restricted to widows and single women.

The Property Law (2004) aimed at improving registration and titling of holdings. It creates a system aiming at a better recognition of property rights in order to activate land markets and regularize the situation of land claims and conflicts. It was recently reformed (2013).

The only formal recognition of rights of indigenous people in Honduras is stated in Art. 346 of the Constitution. In 1994, Honduras signed the Indigenous and Tribal Peoples Convention ILO 169<sup>27</sup>, yet struggles over indigenous rights have continued. The ongoing conflicts over land have been further fuelled by the 1998 constitutional amendments that favor land ownership by large-scale investors. In many cases indigenous land titles are poorly defined, especially in documents that date back to the mid-19th century. Indigenous and non-indigenous communities continue to criticize the government's alleged complicity in the exploitation of timber and other NR on these lands.

According to these documents, holdings in Honduras may be held by the state, private holders or by municipalities:

- National/state estates are under a national rights regime, which is recognized by the Constitution. Over time, however, a variety of farmers have come to occupy national lands and have considered them their own (the historical process of agrarian colonization of Honduras). Many of the land claims on national lands are upheld by usufruct titles issued by local authorities;
- Private holdings cover a large percentage of the total land in Honduras. However, only a small percentage of the population have legal private rights over land, in particular smallholders (large firms exploiting resources have generally managed to legalize their estates);
- Municipal lands are largely excluded from land markets and refer to lands which are awarded to municipalities for common usage and exploitation by the inhabitants of their jurisdiction. However, many of these lands have been privately occupied by families for extended periods of time that have subsequently been awarded usufruct titles by local officials.

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<sup>27</sup> Convention No.169 is a legally binding international instrument open to ratification, which deals specifically with the rights of indigenous peoples. Today, it has been ratified by 20 countries. Once it ratifies the Convention, a country has one year to align legislation, policies and programs before it becomes legally binding. Countries that have ratified the Convention are subject to supervision with regards to its implementation (ILO).



Consequently, in Honduras, one can find situations of ownership of land and related NR, which can be individual or collective. In the case of land granted by the agrarian reform and due to poor record keeping, delineation and confirmation of a title is challenging or impossible; in that of usufruct, which is recognized by law, local authorities may issue usufruct titles for public lands (however, few smallholders who once had only limited rights to their land have received individual or communal titles under government land titling programs); and finally there is leasing, which is legally recognized, in particular for fully titled private and Reform Granted land.

Regarding land use policies and formal regulation, various documents exist:

- The Policy for Territorial Ordering (2003) provides a policy on land use planning as part of national planning that promotes integrated, strategic and efficient management of NR. The law promotes the implementation of policies, strategies and development plans oriented toward sustainable development (Article 1). The law defines land use planning as *“an administrative instrument to strategically manage the relationship between human and natural resources and the physical environment seeking integrated and balanced use in the entire country to promote growth of the economy”* (Article 2). In order to avoid conflicts, the Law establishes that all state agencies have to coordinate efforts, make joint decisions and provide support to each other when necessary (Article 29). In the case of conflicts, the law provides mechanisms of conciliation and arbitration; administrative and legal action or legislative interpretation. In addition the Law establishes public participation through institutional office, public hearings, and consultation meetings, as stated in the Municipality Law (Article 35 and 36).
- The General Law for Environment (1993) sets forth as its objectives the protection of the environment, conservation, the rational use of NR in their broad sense, and the prohibition of pollution. It is the most important law relating to protected areas. This law establishes the framework for administration of protected areas (1997), including national parks. Titles II to IV set forth the categories of NR protected under the law. Article 36 establishes the creation of a Protected Areas System for Reserves that are subject to management plans. Article 38 states that *“owners of private lands and inhabitants of protected areas are allowed to engage in productive activities according to specific norms and the land use designation established in the decree that declares the area”*. In theory, this means that inhabitants of protected areas are limited by law in the development of their agricultural activities. One of the principal conflicts or loopholes’ in this Law are the following: the management of human settlements in the buffer zones of protected areas, in which the legislation talks about “adequate use of the soil” without clear definition of what it is. The presence of people in protected areas continues to be a topic of conflict.

## Forests

The LMDSA establishes the need to formulate management plans for commercial forestry and permits the sale of timber extracted in national forestlands at auction. It recognizes the rights held over the forest, allows the participation of foreign capital in the forestry sector, and reserves trade and industrialization of forest products extracted in national forestlands for the private sector. LMDSA specifies that forestlands should not be subject to impairment, that logging is a function of the private sector, and sets the mandatory forest management plans.

The Law for Forest, Protected Areas and Wildlife (1991; 2007) defines forest areas and provides for more sustainable use of forest resources. The law provides more resources for enforcement of forest regulations, as well as harsher penalties against those who commit forest-related crimes.

Articles 45, 46 and 47 of the General Law of Environment (1993) state that forests should be used in a sustainable manner, and establish that forestry resources should be managed and used according to the principles of protection of biodiversity, sustainable use and multiple use.

The Cloud Forest Law (1987) defines cloud forests as National Parks, wildlife refuges and biological reserves and declares that they are protected in perpetuity. It also states that farms located in buffer or special use zones of protected areas should be regulated under the management plan of the protected area.

The Law for Sustainable Rural Development (2000) promotes the participatory management of forests.

When promulgated, the Penal Code (1983) included a chapter on environmental crimes, which was annulled after it entered into force. *“Congress annulled the provisions on environmental crime from the Criminal Code only two months after its approval. We need to apply other laws to trial criminal cases or use other similar provisions from the Criminal Code. For example, in the case of illegal logging, we prosecute the violators for the crime of ‘providing false information to a government official’.”*

There are two main types of forestland tenure in Honduras:

- National Forests are in the public domain and refer to forest areas under public rights and municipal rights regimes; any forests granted in concessions; as well as all forests within the national territory that are not granted to an individual or indigenous groups.
- Private Forests fall under private property rights (for individual or groups in the case of indigenous people). Indigenous groups have rights to forests on lands which they traditionally inhabit. With the aim of regularizing forestland tenure, the Forest Law contains a procedure that could result in forfeiture of control of forestland to the state if irregularities of possession or occupation exist.

## Water

The water sector, including the supply of drinking water, sanitary sewage systems and garbage disposal, is regulated by the Ministry of Health and SERNA. Legislation in the water sector is quite broad and dispersed throughout various laws. A reformation and modernization process began in 1990, but it has been slow and is still incomplete. Among other issues, these reforms include promoting a new legal framework that can allow institutional changes.

The General Water Law (2009) replaced the National Water Use Law (1927) that granted the State rights over water, giving it *“the full dominion over waters that spring from and flow within the same estate; rainwater runoff through private property, and subterranean waters discovered on an estate by its owner”* (Article 3), and empowering it to regulate water use. The law regulates procedures on water concessions, but lacks integral management of resources and allows for unrestricted exploitation of ground water. Chapter III sets forth regulations for using waters to service families, agriculture and enterprises. *“Every citizen may freely use the territorial seas, rivers, lakes, lagoons, inlets, coves, bays, and creeks for navigation, fishing, loading and unloading, anchorage and other similar acts in accordance with the law’s stipulations”* (Article 8). Under the Law, the right to water is a human right guaranteed by the State. Rights to both surface and groundwater are vested with the State. The law states that water is a social resource and calls for its equal access. It states that human consumption is privileged over other uses. The Law states that water users/individuals have the right to *“manually extract water “for domestic and manufacturing uses and for irrigating isolated plants. This right is limited when the source of water is on private land or the extraction jeopardizes the water concessionaire”* (Article 10). In order to use water, public and private companies must sign a contract with the State. *“This contract may be extended and its duration determined in each individual case depending on the circumstances”* (Article 19).

The Legal Framework for Drinking Water and the Treatment Sector (2003; 2009), amidst strong opposition from some political sectors, non-government organizations, and citizens, gave authority to Municipal governments to manage water services and gave them the possibility to grant concessions to private companies when approved by

the National Congress. Article 2 of the law establishes the following objectives: promote increased coverage of drinking water and treatment services; ensure water quality and drinking characteristics, thus guaranteeing healthy consumption by the people; and promote citizen participation through administrative water boards and other organizational methods for providing services, carrying out projects, and extending potable water and treatment systems.

## Minerals

The General Law on Mining (Congreso Nacional de Honduras 1998) classifies mining activities into: prospecting, exploration, exploitation, processing and commercialization. The Law includes environmental regulations, an income tax and increased municipal taxes. The law restricts the operation of open-pit mines and gives greater importance to environmental concerns<sup>28</sup>. Honduras may grant divisible concessions to individuals or entities that can range from 100 to 1000 hectares, or more in the continental shelf. Mining concessions may be alienated, transferred or encumbered and must be registered. Holders of mining concessions must pay an annual fee per hectare and a minimum annual production is required. In the case of noncompliance, the annual fee may be increased. Concessions may be terminated by cancellation, nullity and waiver.

## Rules in use and influential/important stakeholders in decision making

However, as in Nicaragua, only some of these formal rules are properly known and managed by the state agencies officials and local authorities with mandates and responsibilities related to NR, as illustrated in Figure 16 and 17. In Honduras, according to the results of the survey, all interviewees knew at least one national law, while 27% of the interviewees did not know any sub-national regulations. The Forest Law was the most frequently mentioned (73% of the interviewees); the other national regulations related to NR were generally little-known. The same number of interviewees either did not know any sub-national regulation or mentioned the local norms related to NR that may be elaborated by Municipal Governments.

Figure 16- Formal rules at a national level mentioned by those surveyed in Honduras

	Frequency	%
Law for Forest, Protected Areas and Wildlife - Decree No. 98-2007	8	73%
Policy for Territorial Ordering - Decree No. 180-2003	4	36%
General Law on Mining - Decree No. 292-98	3	27%
Constitution of the Republic	2	18%
General Law on Water	2	18%
General Law on the Environment - Decree No.104-93	2	18%
The Municipality Law - Decree No.134-1990	2	18%
Nation Strategy against illegal logging	1	9%
National Strategy for Climate Change	1	9%
LMDSA - Decree No.31-1992	1	9%

Source: Governance Survey

<sup>28</sup> The Supreme Court of Justice declared the Mining Law partially unconstitutional in 2006, invalidating thirteen articles, including the provision that allows mining companies free access to water. Following this action, reforms to the law prohibited open-pit mining and the use of chemicals such as cyanide, mercury and arsenic.

Figure 17 – Formal rules at a sub-national level mentioned by those surveyed in Honduras

	Frequency	%
Interviewee do not know any sub-national regulation	3	27%
Municipal norms related to NR	3	27%
Local Territorial Ordering Plans	2	18%
Management Plan of the Reserve of Rio Plátano	2	18%
Local Forest Management Plans	1	9%

Source: Governance survey

As per in Nicaragua, the Honduran policy and legal frameworks related to NR attribute responsibilities and mandates to many public agencies. The results of the survey in Honduras, analyzed the same way as in Nicaragua, allow the mapping of key stakeholders engaged in the governance of NR (the bigger the name of the Stakeholder, the more influential they are in decision making, the bigger the link between Stakeholders, the stronger the relations between them) (see Figure 18).

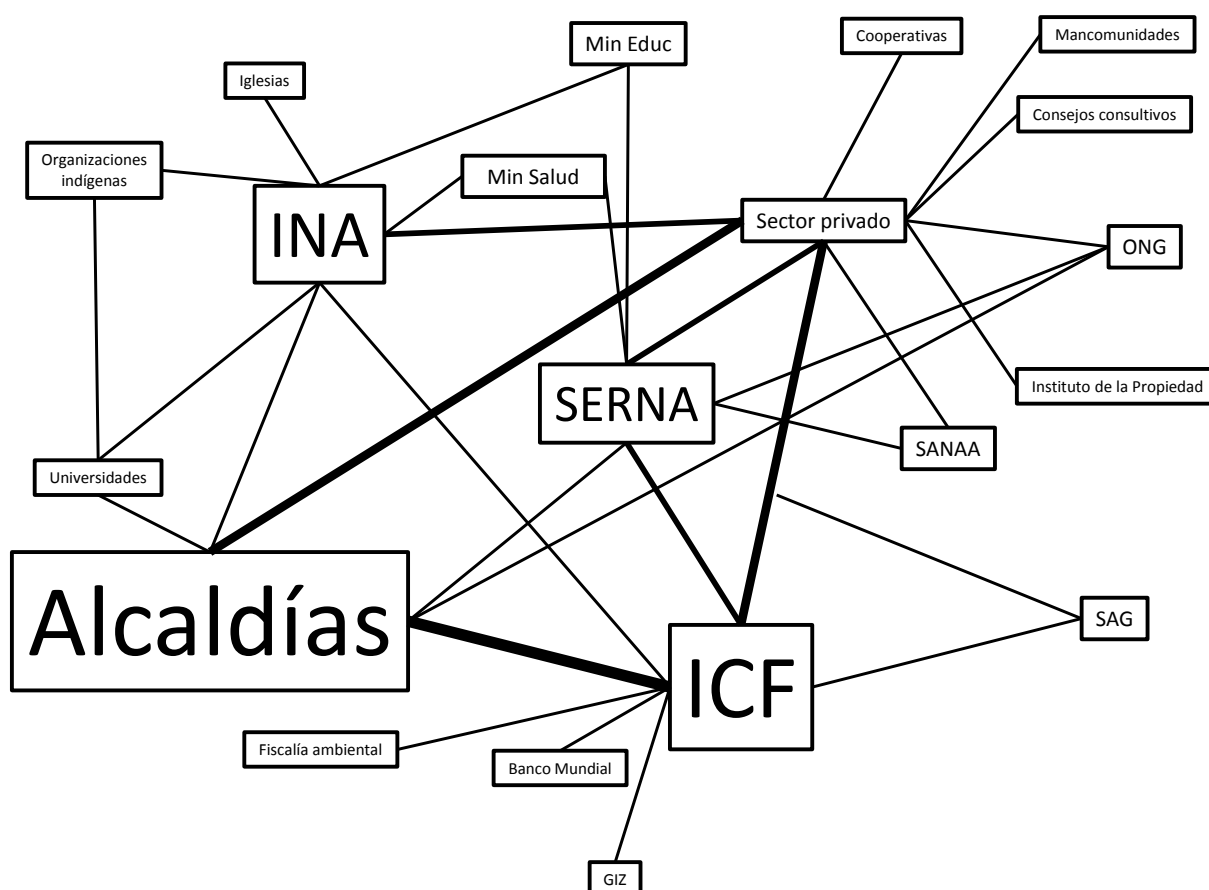


Figure 18 – Map of actors according to the perceptions collected in the Governance survey in Honduras

Source: Governance Survey

The survey showed that, from the perceptions of the interviewees, Municipal Governments (*Alcaldías* in Spanish) are the most influential key stakeholders in decision-making or implementation related to NR in Honduras. Indeed, in their mandate and responsibilities, they have authority to design and implement land use planning and to determine land-use zoning according to economic, demographic and social factors, in coordination with SAG. However, interviewees also recognize that there are no clear procedures in place to do this, which obviously leads one to question their real importance. Municipalities also have the authority to promote environmental protection and conservation, and especially to control pollution. They shall participate in the development of protected areas in accordance with what is stated in the corresponding law, which grants them a certain level of independency from centrally-driven state agencies, as long as they respect national policies' goals and strategy and that the plans and programs they elaborate are performed within national priorities and goals. Articles 59-62 of the Environmental Regulations detail the relationship between the Municipal Governments and SERNA, requiring that SERNA should assist the municipalities in implementing the Environmental Law. In addition, Article 47 of the Forest law states that Municipal Governments shall also participate in the administration of forests. As a result, the legal and policy frameworks show a clear decentralization process in which the central State delegates many mandates and responsibilities to Municipalities, in coordination with the central state itself. However, interviewees clearly recognized that Municipalities need to be strengthened to be able to carry out those functions for better decision-making at the local level.

The Forest law abolished the State Forest Administration-Honduran Corporation of Forest Development (Spanish acronym: AFE-COHDEFOR) which was a semi-autonomous state agency with an oversight board comprised of various institutions in the Central Government and the private sector, charged with the implementation of national forestry policies and monitoring the use of natural resources. As a result, the Institute of Forest Conservation (Spanish acronym: ICF, <http://www.icf.gob.hn/>) was established in 2007 to introduce regulations, execute national policy on forest development and conservation, and issue permits for forest extraction to corporations and individuals. ICF was cited during the survey as the second most influential stakeholder in the governance of NR in Honduras. Among others, ICF is specifically charged with implementing the National Forest Program (PRONAFOR) and to introduce regulations on the use of forestland. Under the Law of Environment, ICF grants licenses to individuals or corporations for logging.

The National Agrarian Institute (Spanish acronym: INA, <http://www.ina.hn/>) was also considered as a key influential stakeholder in decision making and policy implementation. Indeed, INA is responsible for the land use planning in areas under national property rights and those that were redistributed by the agrarian reform. It is also responsible for the adjudication of land claims. INA oversees the regularization of tenure for indigenous groups under the Property Law. Under the Decree 18-2008, INA also has the mandate to solve land conflicts, to allocate land and title it, administrate the Cadaster and purchase land to meet the demand of the rural sector.

The Secretary of Natural Resources and the Environment (SERNA, <http://www.serna.gob.hn/>), from the perceptions of the interviewees, remained one of the key actors but with less influence on decision making. However, by law, SERNA is responsible for implementing and enforcing environmental legislation for developing, coordinating and monitoring environmental policies, in coordination with other state agencies that have mandates in environmental, energy and mining development matters.

Article 21 of the Forest Law establishes national, departmental, municipal and community-level Consultation Committees on Forest, Protected Areas and Wildlife to ensure that social participation and information flow from the local up to the national level. Those Committees are expected to monitor compliance and performance of the various stakeholders in the sector, but as stipulated during the survey, their influence appears to be quite limited in decision-making.

The Secretary of Agriculture and Livestock (SAG, <http://www.sag.gob.hn/>), surprisingly, is not considered to be among the most influential stakeholders, according to the survey. Nevertheless, SAG is responsible for directing and coordinating the agricultural sector and its main function is to formulate policies for agricultural and forestry activities. SAG has the responsibility of issuing and implementing resolutions regarding the declaration of protected areas.

The Water Law established a National Water Authority, attached to SERNA, which is an advisory and deliberative agency responsible for implementing water policies. The Water Law decentralized water supply management from the National Autonomous Service of Aqueducts and Sewerage Service (SANAA) to Municipalities, who are responsible for water provision, as governed by the National Water and Sanitation Council (CONASA) and regulated by the Potable Water and Sanitation Regulatory Agency (ERSAPS). CONASA is responsible for planning, financing and developing rules, while ERSAPS is responsible for their implementation. In rural areas, Water Management Boards (JAA) control water use. The boards are governed with technical and administrative assistance by SANAA, which also operates many of the urban water and sanitation systems.

The Property Institute (IP, <http://www.ip.gob.hn/>) was mentioned by few interviewees as a key stakeholder. This decentralized state agency operates the property registration system and has jurisdiction over 22 registries, including one in each of Honduras' 18 Departments. The IP also oversees the Executive Directorate of the Cadaster and Geography, and the Directorate of Property Registry, which is regulated by the Supreme Court and is present in each department.

The General Attorney's Office for the Environmental (*Fiscalía* in Spanish), which was created in 1994 as a professional, specialized office independent from all branches of the State, was also barely mentioned as a key stakeholder in the survey. Its main responsibility is to investigate crimes of forest violations, contamination violations, crimes related to water sources and protected areas (that are sanctioned with 3 to 10 years of jail), and carry out all criminal public actions. The objective of the Office is to *"collaborate with the protection of the environment, ecosystems, minority ethnic groups, preserve the archaeological and cultural patrimony and any other collective interest."* The Attorney General, who is elected by the National Congress, is the highest authority of the Office. It is responsible for defending the interests of society when the regulations on natural resources and the environment are infringed and for filing lawsuits in relevant cases.

The Ministry of Education, also barely cited in the survey, is responsible for providing primary education for the population and for formulating and implementing the education policy, in particular, environmental education. The Ministry of Health, another actor rarely mentioned, is in charge of health policy countrywide and participates in the monitoring of water quality in local systems of supply.

Associations for the defense of indigenous rights, among which the Association of Garífuna Communities of Honduras (MAMUGAH), were also infrequently mentioned, but appear in the map of key stakeholders; together with Municipal Governments in Colon, they promote the defense of Garífuna people.

Aside from the aforementioned key actors, other stakeholders have a supposed role in NR governance by law but weren't mentioned in the survey:

- The National Council on Land-use Planning (CONOT)<sup>29</sup>, a consultative and advisory office responsible for proposing, coordinating and following up national land-use planning and implementing programs, projects

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<sup>29</sup> The Law also creates Department Councils of Land Use Planning in each Department (Province), which are coordinated by the Department Mayor (Art. 16). The Department Councils coordinate and implement local policies of land use planning; establish

and actions on land use planning. CONOT is assigned to the Secretariat of Governance and Justice and is responsible for implementing and enforcing the Territorial ordering policy, in coordination with the Presidency and the Council of Ministers.

- The Police and the Army carry out activities related to the monitoring of timber transportation. Both organizations support the General Attorney's Office for the Environment in the execution of warrants for arrest and court sentences.

## PERCEPTIONS OF THE CURRENT STATE OF NR GOVERNANCE

### POLICY, LEGAL, AND INSTITUTIONAL FRAMEWORKS

As previously mentioned, the policy, legal and institutional frameworks are dense and seemingly countless both in Nicaragua or Honduras. As stated by an interviewee in the survey when asked about his/her knowledge of formal regulations: *"only in relation with productive aspects related to agriculture, we have more than 12 laws and regulations, many ministerial resolutions, some presidential decrees, and multiple technical norms. The policy and legal system is innumerable!"*

#### *Coherence and adaptability of the policy and legal frameworks*

In Nicaragua, the large majority of those surveyed believe that the legal-political system related to NR is, in general, relatively consistent and that the laws and regulations are not in contradiction. Similarly, most of the interviewees consider (73%) that formal rules are as consistent between the national and the sub-national level, as they are between sectors (73%). However, as stated by an interviewee, the perception is also that: *"laws and regulations are mostly elaborated by and from the central level; obviously, there is a level of interpretation at the local level, but people prefer not to enter into the detail because when they do so, most of the national regulations enter into contradiction with the Law of Municipalities in environmental and NR matters [i.e. as by law, the Municipal Governments have authority and the autonomy to administrate NR in their jurisdictions]"*. Another interviewee also mentioned that *"inconsistencies [in the application of laws] are not due to inconsistencies in policy documents, but rather to the fact that the country is in the Third World, and that one situation generates many situations that shall be analyzed and resolved with flexibility, sometimes with inconsistencies"*.

Of those surveyed, 42% did not express an opinion when asked if they think that informal rules are the result of inconsistencies in the laws and regulations, either because they do not recognize the existence of informal rules (42%) or because they believe that the legal-political framework is of a high quality, something that many attribute to the fact that Nicaragua has signed various international Treaties and agreements. Of those who recognize the existence of informal rules, 58% think that they are consistent with the formal rules in place for the management of NR. As for the existence of a system of monitoring and evaluation, half of those surveyed believe that systemization of the results always or often takes place (49%), but 34% do not know whether such a system to analyze the impacts of the public projects and programs related to NR exists.

In Honduras, two thirds of people surveyed (67%) think that the laws and regulations for management of NR are not consistent with those others of a general nature, and so enter into conflict with them. 76% of those surveyed believe that neither are they consistent between the national and sub-national level, but only 44% think that they are not consistent between sectors; however, it should be taken into account that 22% do not have an opinion on the

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mechanisms for evaluation of land use plans; establish planning strategies of the municipalities; and implement actions requested by CONOT.



subject, most likely because they are not familiar with the formal rules of other sectors, regarding which they do not have any duties or responsibilities.

All of those surveyed believe that the existence of informal rules results from inconsistencies in the system of formal rules. Opinions diverge about the level of consistency between formal and informal rules: half of survey respondents do think that they are consistent, while the other half thinks the contrary. Half of interviewees doubt or ignore the existence of systemization (43%), but 88% think that a system for the analysis of the impacts of public projects and programs of NR management does exist.

### *Clarity of the definition of the mandates and responsibilities of state officials*

In Nicaragua, 83% of those surveyed think that the mandates and responsibilities of state agencies, and the officials of Municipal Governments and Indigenous authorities regarding the administration of NR are, in general, clearly defined, particularly between the national and the sub-national level (93%). However, only 61% think that the national development strategy is widely known and disseminated to staff at all levels, which suggests that at times the role of each person in national policy is limited. However, as stated by an interviewee: *“policy and legal documents are clear in defining the roles of the various actors, but at the time of implementing formal rules, no one knows who is responsible or not”*. This is particularly the case in buffer zones of protected areas (especially Bosawás), where various local authorities and state agencies have responsibilities, among which: MARENA, MAGFOR, INAFOR, Indigenous authorities at Regional, Territorial and Community levels; as well as Municipalities.

In Honduras, slightly less than half of those surveyed (45%) believe that the duties and responsibilities of state organizations related to NR management are, in general, clearly defined, particularly at the national and sub-national level. None of the survey respondents gave an opinion, or did not know how to respond, regarding the level of dissemination of the national development strategy.

### *The primacy of property rights*

In Nicaragua, 74% of those surveyed consider that the laws and regulations legally recognize property rights over the land and 76% think this is the case over other NR. In particular, 72% think that the customary rights of indigenous people over the land are legally recognized: 76% believe that customary rights should be recognized in the same way as other types of rights (only 5% think that they shouldn't be recognized). An interviewee (a *mestizo* from the Central-North Region) mentioned on that matter that: *“indigenous people should have more rights over NR than mestizos as we are the invaders; 100 years ago, indigenous people came and settled in the country, each group with its land, but over time, because of demographic pressure, because of poverty, and because of other political interests, we displaced other indigenous groups from their land; but it is their land and the law should recognize it as this”*.

In Honduras, 63% of survey respondents believe that the laws and regulations legally recognize rights to ownership of the land, but only 44% consider that rights to other NR are legally recognized. In particular, 75% think that the customary rights of indigenous peoples to the land are legally recognized: 67% believe that the rights of indigenous peoples to NR should be recognized in the same way as other types of rights (note that 11% think that they should not be recognized).

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## PERFORMANCE OF FORMAL RULES

### *Simplicity of implementation and administrative bureaucracy*

In Nicaragua, only two thirds of those surveyed consider the formal rules put in place for administrating NR as simple to implement and apply (63%). Just less than half believe that there is a high level of bureaucracy within the process of implementing these rules.

In Honduras, 78% of those surveyed think that the formal rules put in place for management of NR are difficult to implement and apply. 56% believe that there is a high level of bureaucracy within the process of implementing these rules.

### *Inter- and intra-organizational and inter-sectoral coordination*

Of those surveyed in Nicaragua, 68% consider that official inter- and intra-organizational and inter-sectoral mechanisms for coordination exist, and that they work in a comprehensive manner. This situation can be related with the existence of Municipal Commissions which function as sectoral or thematic platforms for social participation and coordination at a municipal level, generally including representatives from the Municipal Governments, delegations from the relevant ministries, as well as actors from civil society, coordination projects and NGO projects. However, it should be noted that around one third of survey respondents think that these mechanisms are either not comprehensive or do not exist, which could be related to the fact that in Municipal Governments from a political party other than the party of the government (FSLN), these platforms either do not exist or have suffered serious problems in their operation. 85% of those surveyed believe that, generally, state actors help each other, and particularly between central and municipal levels (88%). However, as stated by an interviewee: *“state agencies help each other, but it clearly depends on the official’s will to coordinate with colleagues or not, even if it is stipulated by law”*.

In Honduras, only one third of survey respondents consider that inter- and intra-organizational and inter-sectoral coordinating mechanisms exist, and that they work in a comprehensive manner. The majority believe that there is neither any form of coordination nor official mechanisms of coordination. Only 55% of those surveyed think that state actors tasked with management of NR help each other, although 71% believe that coordination between the central and local level functions well.

### *Effectiveness of laws and regulations and influence on behavior*

In Nicaragua, perceptions of the effectiveness of the implementation of the formal rules related to NR vary according to the interviewees: just over half believe that they are often or always effectively implemented, while a quarter believe that they are rarely or never effectively implemented. However, 66% of those surveyed think that they are never, or rarely, implemented correctly. 72% consider that ownership rights over NR are correctly protected by law, and 64% consider that the rights of indigenous peoples in particular are correctly protected. A respondent to the survey mentioned: *“we usually apply procedure incorrectly, but the situation is also due to the lack of staff: for instance, in the case of crimes against the Environment, we don’t have an environmental prosecutor at the municipal level; and one should also consider that with limited staff, we should give priorities: when at the same time there is a crime against the environment and another of domestic violence or a murder, staff go for the second one first, and then it is too late”*. This statement was reinforced by the statement of another interviewee that declared: *“the bottleneck in the administration of NR is that there are so many other priorities in this country...”*

In Honduras, more than half of those surveyed (55%) believe that formal rules related to NR are never or rarely implemented effectively, and no more than 11% think that they are always implemented. Almost all of those

surveyed believe that the system of laws and regulations related to NR is not implemented correctly in any way. Of the survey respondents, 56% do not think that ownership rights over NR are correctly protected by law, and furthermore, one third of respondents believe that the rights of indigenous people are not correctly protected.

### *Obtaining concrete results*

Of those surveyed in Nicaragua, 45% think that the formal rules related to NR are not complied with. Non-compliance of these regulations is illustrated in the application of land demarcation and titling: half of the survey respondents think that an individual, even one from outside of a municipality or a territory, would not be able to identify who are the rights holders over the land and NR that they encounter; in the same way 59% do not know if national lands have a physical demarcation clearly registered in a land registry (only 22% think that state lands are not demarcated with a boundary stone nor registered in the public domain), only 26% of those surveyed believe that private lands are demarcated and registered correctly everywhere in the municipality or territory in which they work, and 34% believe that this situation also applies for communal lands (note that for these questions 27% either do not know how to respond or do not give an opinion).

The collection of local taxes related to the access, use and exploitation of NR is another example that can be analyzed through the responses of those surveyed: 38% consider that they are never or rarely collected, and 38% that collection takes place in an irregular manner. Of the survey respondents, 44% think that environmental offenses are never or rarely investigated sufficiently, and consequently only a third believe that measures for the prevention of environmental offenses are effective. Perceptions about measures for the detection and suppression of these offenses do not fare much better, with only a quarter and a fifth respectively of those surveyed believing that they are effective.

Nevertheless, 52% trust in judicial power and believe that the decisions of judges and judicial personnel regarding environmental offenses are applied according to the law. Finally, a further illustration is in the (in-)existence of management plans of Reserves, environmental plans, or land-use management in many surveyed municipalities, which are obligatory by law: only 37% of those surveyed think that all protected areas in their municipality have a valid management plan (7% don't know how to respond), 24% say that their municipality has a valid environmental plan (17% don't know how to respond) and just 16% are effectively aware of the existence of a land-use plan in their municipality (22% don't know how to respond). However, as stated by an interviewee: *"very few protected areas have a management plan or better said, very few have an operational management plan, which means that in the best cases, they have a formal stamped document, but in the field, no one knows what is inside that document that stays in drawers; only where there is an economic interest [he/she refers to the Mombacho Volcano Reserve as an example], with tourists, do protected areas have a management plan that is effectively known and implemented"*.

In Honduras, 89% of survey respondents think that the formal rules related to NR are not complied with. However, the situation does not seem to affect the demarcation and titling of holdings, as it does in Nicaragua, since 78% of those surveyed believe that private lands are correctly demarcated and registered in all, or the majority, of places, and 67% think that this applies for national lands; nonetheless the situation of communal lands doesn't seem as clear owing to the fact that one third of respondents do not know how to respond or do not give an opinion, and another third don't believe that these lands are demarcated or registered anywhere countrywide, or in very few places.

In terms of the collection of local taxes related to the use, access and exploitation of NR, 45% consider that they are never or rarely collected, and 33% only from time to time. Of those surveyed, 78% think that environmental offenses are never investigated sufficiently, and consequently 56% believe that measures for the prevention of environmental offenses are never effective. Perceptions of detection measures are not much better given that 66% of those surveyed believe that they are never or rarely effective (78% for measures for the suppression of environmental

offenses). Equally, the majority of respondents (55%) don't believe that the decisions of judges and judicial personnel in relation to environmental offenses are applied according to the law. Finally, in terms of the existence of plans for management of reserves, for land-use and for the environment, only 11% of respondents consider that the reserves in their municipality have a valid management plan (34% think that this is rarely the case and 11% don't know how to respond), 22% believe that their municipality has a valid environmental plan (11% don't know how to respond) and just 11% think that their municipality has a valid land-use management plan (11% don't know how to respond).

### *Existence and resolution of conflicts*

In Nicaragua, the situation with respect to conflicts around NR varies greatly according to location. However, generally the survey respondents consider that conflicts implicate disputes between communities more than they implicate the State (only 19% say that there are always conflicts between the State and communities): half of those surveyed say that there are always, often or occasionally conflicts between communities in their municipality. Furthermore, the majority think that this will continue to be the case indefinitely, such conflicts being very difficult to resolve, although informal measures are frequently used (according to 46% of respondents) to resolve conflicts.

In Honduras, the situation of conflicts related to NR seems to be that they are widespread and tense according to the respondents: 44% believe that there are always or often conflicts between the State and communities, and 56% say that this is the case between the communities themselves. However, those that did respond think that conflicts are exceptional and quickly resolved, although informal measures for conflicts resolution are used only rarely (the opinion of 67% of respondents).

### *Ability of staff to implement formal rules*

In Nicaragua, most of those surveyed point out problems related to the ability of staff to fulfill their mandates and responsibilities, for various reasons: lack of sufficient technology (53%), of sufficient budget (66%) or inadequately revised budget (49%), level of salaries inadequate for retaining or attracting competent staff (68%), and insufficient incentives received by staff (56%), even though according to many respondents the staff have adequate qualifications (57% think so, particularly for technical positions in the field). The respondents also believe that staff generally do not have the ability to correctly meet the needs of their assigned areas (41% think these needs are never or rarely met). However, perceptions of the judicial staff in charge of environmental crimes and offences vary: 40% think that they never or rarely have the ability to effectively confront offenses, and 36% think that this is through lack of will to confront such offenses. One interviewee stated that: *"General Attorney's Office staff, judges or prosecutors are only present in the Pacific of Nicaragua, while crime offenses and crimes occur in the Central-North or in the Atlantic Coast, where is the richness of NR, but the poverty of people"* and another one thought that *"judges and prosecutors are not prepared to defend against environmental crimes as they are prepared to do for other thematics"*.

In Honduras, 78% of survey respondents think that budgets are never enough to satisfy the needs that are present, and 89% believe that they are never or rarely adequately revised. Correspondingly, 89% think that the level of salaries is always or almost always inadequate to retain or attract competent staff, and 67% think that the incentives that they receive are insufficient. In contrast with Nicaragua, however, a majority of the interviewees think that the qualifications of staff are never or rarely in accordance with their mission. 56% of those surveyed say that staff only occasionally have the ability to meet the needs of the areas that they are assigned to. The survey respondents' perceptions of judicial staff are quite negative: 78% think that they never have the ability to confront environmental offenses and for two thirds of respondents, this is due to a lack of will.

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## DECENTRALIZATION AND PARTICIPATION IN DECISION-MAKING

### *Decentralization of decision-making in the administration of NR*

In Nicaragua, for the majority of those surveyed (66%), NR administration is decentralized effectively, although there remains a considerable part that do not agree with this (31%). However, almost all survey respondents believe that decentralization of NR administration is desirable (80%), a situation that contrasts with the statement of one interviewee: *“the problem with decentralization is that in this country, when things are decentralized, they get messy, there is no coordination, and no articulation between what is implemented, including at the same local level”*.

In Honduras only 44% think that the administration of NR is decentralized effectively, but 56% of interviewees also think that decentralization is not ideal for NR management.

### *Simplicity and comprehension of the policy and legal frameworks*

In Nicaragua, according to almost half of those surveyed (46%), the political and legal framework is difficult to understand for most people. In Honduras, 78% of respondents think that laws and regulations related to NR are difficult to understand for most people. On that subject, an interviewee declared: *“to those who make policy and legal documents, regulations are simple, clear, because those who made them are capacitated, they are professionals in that matter; but to us, and to the many, what is said in the laws is tricky, and refers to complex concepts that no one but them can understand, and consequently that makes it difficult to implement”*.

### *Social participation and inclusion of marginalized groups and minority stakeholders in decision making*

In Nicaragua, the vast majority of those surveyed believe that either there aren't any mechanisms for participation, that mechanisms exist but they don't work (25%), or that they function badly (27%). Indeed, when asked to specify an example of participation that took place in the development of a regulation related to NR management, very few respondents could give an answer. In terms of the perception of levels of participation, for most of the respondents participation is not a widespread phenomenon: civil society participates only occasionally (22%), rarely (27%) or never (7%), in the decision-making process. Perceptions of the participation of women are similar: they participate occasionally according to 32% of respondents, rarely according to 19% and never according to 7%; perceptions of the participation of agricultural producers are that they participate occasionally (29%), rarely (24%), or never (7%); participation of the private sector was said to happen occasionally (20%), rarely (29%) or never (9%); while perceptions of the participation of indigenous people are better: 54% believe that they always participate and 27% that they often participate. However, as stated by a functionary: *“we [as officials from the government] need to remember that we are those who implement regulations, we don't elaborate them; very rarely, those lawyers and experts that makes laws ask us, ask the many, to find out what we/they want or what we/they think about the laws they make”*. Another interviewee declared: *“the mechanisms for participation exist, but it depends on the magnitude of the Project, because if the Project is important [he refers to money or economic benefits] it is mandatory to make people participate; in that case, people elaborate documents, very technical documents, and give them to community members, but often they just forget that these people, in the communities, they don't even know how to read, so how do you want them to really participate in that?”*.

In Honduras, as in Nicaragua, most of those surveyed think that there aren't any mechanisms for participation (33%) or that they don't work (22%). However, perceptions of the effectiveness of citizen participation in decision-making are positive in that 73% believe that it is effective and 42% that it always or often occurs on a significant scale: in particular, 40% of respondents think that women and agricultural producers participate always or often, 81% for indigenous peoples, and 42% for the private sector.

### *Existence of mechanisms or opportunities to report or recognize objections to formal rules*

In Nicaragua, 52% of those surveyed consider that effective mechanisms to report corrupt practices to a competent authority exist (19% think that no official mechanism exists to fight against corruption or traffic of influence). However, the majority say that reports or complaints of these practices never (17%), rarely (26%) or only occasionally (12%) lead to adequate investigations or sanctions. Many of the respondents mention that people fear the repercussions of making such complaints or reports, sometimes for their own safety, and for this reason they do not carry out the proceedings.

In Honduras, 57% of those surveyed believe that effective mechanisms for the reporting of corrupt practices to a competent authority always or often exist, but only 37% believe that these reports or complaints always lead to adequate investigations or sanctions.

### *Transparency of management systems and free flow of information*

In Nicaragua, 78% of survey respondents consider that authorities and state agencies only rarely or occasionally provide access to information related to NR, and 45% think that also only rarely do they encourage public debate on this topic, while 67% believe that they will not be sanctioned for neglecting to do so. Only 39% of those surveyed think that state agencies and authorities in charge of administering resources provide quality information on the legal framework and make it publicly available, only 39% believe that such information is always understandable and only 39% that it is always accessible. A survey respondent stated on this topic that: *“of course, information is available physically at our offices and on the internet (there is our website); but few people come here and ask, and if they do so, many of them do not know how to read those documents; However, sometimes there are legal and policy documents with pictures, that are much more accessible [he/she refers to the Forest law]; sometimes we even try to make campaigns on those topics, but that costs a lot and without Projects [referring to external cooperation or NGOs’ Projects] we don’t make it.”* In addition, it is generally believed by 49% that there are effective mechanisms for the accountability of public spending in NR management. Perceptions on the existence of external evaluation and monitoring systems for public activities related to NR vary: only half of those surveyed think that there are external evaluation bodies.

In Honduras 58% of those surveyed think that the authorities never, rarely or occasionally aid access to information related to NR management, 52% think that they never, rarely or occasionally encourage public debate on the matter, and furthermore, all respondents believe that that they are not sanctioned in response to this. Of the respondents, 44% think that the institutions of the state and authorities in charge of NR management never or rarely make quality information on the relevant laws and regulations publicly available, and when this does take place, it is only occasionally understandable (67%) and accessible (45%). None of the respondents have information nor an opinion about the accountability of public spending in NR administration.

### *Corruption and traffic of influence*

There is the perception in Nicaragua that a system is in place to combat corruption and misuse of power. Half of those surveyed (52%) believe that state organizations and local authorities charged with NR management have a code of conduct in order to effectively fight corruption and misuse of power. Nonetheless, only 56% of respondents think that the private companies that use or exploit NR work in an open and transparent manner, in adherence with the relevant laws and regulations; and 59% that the approval of forest or mining concessions, exploitation permits and resource usage or exploitation rights are transparent and free from corruption and/or misuse of power, while 16% clearly consider that corruption and misuse of power are present in public management, particularly in the

processes of demarcation and titling (20% don't give an opinion or don't want to answer). In general, the respondents feel uncomfortable talking about corruption and misuse of power in NR management, and felt that it was a sensitive issue. However, various officials spoke freely on the subject, and in some cases even gave relevant anecdotes. One of them mentioned the existence of real mafias in the trade of timber, in particular precious timber extracted in indigenous community in the heart of Bosawás; another interviewee told us a story of timber traders that put an very large amount of money (several thousands of US dollars in cash) on the table of his/her office, to make him deliver a permit for transportation of that timber for export; as he/she refused the money, telling them that cut trees would be confiscated anyway, the traders told him to keep the money anyway, but just allow them to buy the confiscated timber during the corresponding auctions.

In Honduras, 56% of those surveyed believe that state organizations and local authorities charged with NR management have a code of conduct in order to effectively fight corruption and misuse of power. Without exception, though, all respondents think that the private companies that use or exploit NR never function in a way that is open and transparent, and in adherence with the relevant laws and regulations. 78% believe that the approval of forest or mining concessions, exploitation permits and resource usage or exploitation rights are transparent and free from corruption and/or misuse of power, while 56% believe this to be the case with demarcation and titling processes.

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## EQUALITY AND IMPARTIALITY OF THE FORMAL SYSTEM

### *Distribution of benefits within the society*

In Nicaragua, 83% of those surveyed think that the formal rules related to NR equally serve the interests of both women and men, some of them mentioning that this is the case because *"it is a priority of the Sandinista government"* and because *"Mother Earth has a feminine name"*. In terms of redistribution of local taxes related to NR, most respondents (51%) do not consider them to be redistributed in an equitable way. Only a third of those surveyed think that the laws and regulations for the administration of NR are unfair (10% don't give an answer), and, when this is the case, that it is particularly towards small producers, indigenous peoples, and also women, in contradiction with the previous statement. An official that was interviewed mentioned that, *"the term fair is quite ambiguous and relative, as for instance, relating to water, the National Water Law authorizes the attribution of water rights to large-scale companies that then use millions of cubic meters of water; in this case, it is legal, and within the law, but is it fair to the community people that are poor and that because of these large-scale companies, won't have any water left to produce their food?"*. Another mentioned that: *"many small-scale farmers are not able to fulfill administrative procedures, in particular in the Forestry sector, as they don't have holdings with legalized titles and consequently, they suffer from regulation while those large-scale land rights holders, with titles, they are the one who benefit from forest incentives because they are titled"*. Another one stated that: *"the law is not unfair, but sometimes, the functionaries are unfair"*.

In Honduras, only 56% of survey respondents consider that there is gender equality in the legal and political framework for NR management. With respect to redistribution of local taxes related to NR, 56% believe that they are not equitably redistributed. Of those surveyed, 56% think that the legal and political system for NR administration is not fair, particularly towards small producers and indigenous people.



### *Access to judicial power and impartiality in the application of sanctions*

In Nicaragua, 48% of survey respondents believe that the courts and lawyers involved in acting against environmental crimes are never or rarely accessible from a financial point of view, and consequently are reserved for those who have the necessary resources. Just a quarter of the respondents think that the application of sanctions against environmental offenses is equitable, perhaps because half do not believe that judicial power is independent or fair (39%).

In Honduras, 45% of those surveyed think that the courts and lawyers acting against environmental offenses are never accessible (10% don't give an answer) and 44% rarely. Of the survey respondents, 56% said that the application of sanctions against environmental offenses is never equitable, and 33% rarely, while 67% of respondents doubt the independence and fairness of the courts and lawyers that confront such offenses.

### *Impartiality of decision-making and of judicial power*

In Nicaragua, perceptions of partisan influence in the administration of NR vary. Slightly less than half of those surveyed (48%) consider there is clearly a strong partisan influence in NR administration<sup>30</sup>, but many of them (some who even clearly said that their positions were 'political' positions) do not consider it to be a handicap, rather that it facilitates actions that are in agreement with, and enables them to better position their mission within the national policy of the country. However, 71% of those surveyed believe that it is never or rarely the case that civil servants hold a technical position in the administration of NR due to being an active member of a certain political party.

In Honduras, 89% of those surveyed think that political or partisan influence in the management of NR is strong, and 78% think that civil servants who occupy positions related to NR management have these positions as a result of being active members of a political party.

## LOCAL INSTITUTIONAL ARRANGEMENTS RELATED TO NR: ILLUSTRATIONS FROM CASE STUDIES

### LOCAL GOVERNANCE OF NR IN INDIGENOUS COMMUNITIES IN NICARAGUA: AN ILLUSTRATIVE CASE STUDY OF A CHALLENGING COMMUNITY-BASED FORESTRY MANAGEMENT

#### *Environmental and geographical context of the site*

The site is characterized by a tropical humid climate, with average annual rainfall of more than 3,000mm. For one, this quantity of water helps to maintain the level of the Wawa River and the streams that serve for agricultural purposes, in the provision of a crucial part of the local diet (fish), and as a means of transport, among other things. Furthermore, during the rainiest months (between June and November), the Wawa breaks its banks, enabling the fertilization of the soil and allowing high yields of grains. However, these floods also represent one of the biggest dangers presented to the communities: when the river rises, the water level can extend as far as 2Km on each side of the Wawa, which can bring about significant damage to harvests and housing, as, from a topographical point of view, the area is generally rather flat, with small fissures.

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<sup>30</sup> Nicaragua is a multiparty constitutional republic by law, but in recent years political power has been concentrated in a single party, with an increasingly authoritarian executive exercising significant control over the legislative, judicial, and electoral branches.

From an environmental point of view, the site can be divided into two parts, corresponding to two distinct ecosystems: (i) in the Plain, the soils are laterite and are quite unsuitable for agriculture; in this area, the natural vegetation consists of a coniferous forest (*Caribbean pine*) with a high capacity for natural regeneration; pine forest is recuperating here (in particular from the effects of Hurricane Felix which destroyed the forest in 2007<sup>31</sup>), although some dispersed mature stands are scattered around and together form a considerable amount; (ii) the second ecosystem identified is an area of highly diversified broadleaf forest<sup>32</sup>: more than 110 species are in evidence, of which 18 are marketed, such as *Vochysia guatemalensis* (*palo de agua*), laurel (*Cordia alliodora*), *Calophyllum brasiliensis* (*santa maría*), *Symphonia globulifera* (*leche maría*), *Stryphnodendron microstachyum* (*guanacaste*), *Hyeronima alchorneoides* (*nancitón*) and balsa wood (*Ochroma pyramidale*) -which, according to their characteristics, can be used for construction of houses, canoes, rafts and paddles-, mahogany (*Swietenia macrophylla*), oak (*Quercus humboldtii*) and cedar (*Cedrela odorata*), which are destined for timber sale in markets due to their higher monetary value. In this ecosystem, various plants that are also found are used to practice magic, sacred rituals and traditional medicine, as well as a varied and important fauna. However, as shown by Figure 19, deforestation is ongoing and the natural ecosystem and the forest cover are both threatened.

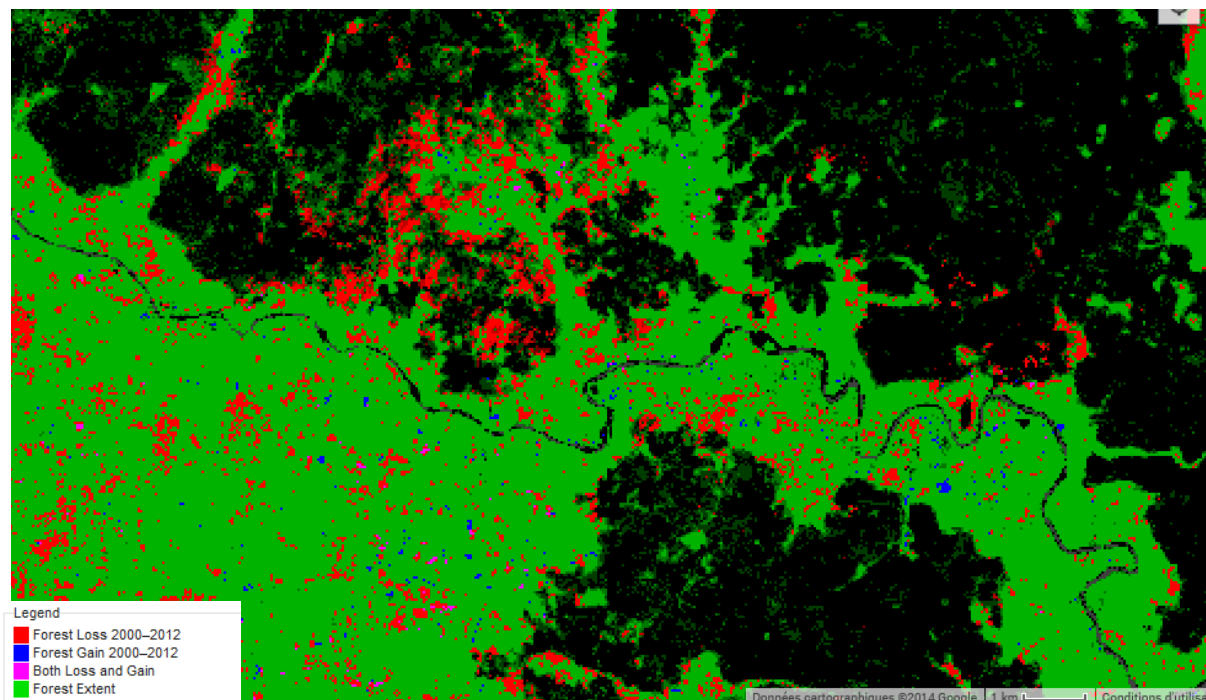


Figure 19 – Map showing the forest coverage and distribution of the pine plain (in black) and broadleaf forest throughout the site

Source: <http://earthenenginepartners.appspot.com/science-2013-global-forest>

Although official demographic data does not exist, the human population of the Block is estimated, in the Twi Yahbra Strategic Plan 2013–2030, at around 3,500, of which 53% are women. According to fieldwork, the population of the Block is estimated at 556 dwellings (see Figure 20) and is mostly concentrated in two communities: Auhya Pihni (52% of the population) and Sangnilaya (20%).

<sup>31</sup> In late 2007, Hurricane Felix, a category 5 hurricane, struck the northeastern Atlantic Coast of Nicaragua destroying a total of almost 510,764Ha of forest.

<sup>32</sup> In which more than 70% of the basal area is formed by broad-leaved species

Community	Houses	Total population		
		Women	Men	Total
Sangnilaya	130	370	330	700
Iltara	34	98	123	221
Panua	66	190	200	390
Butku	46	105	105	210
Auhya tara	10	60	50	110
Auhya pihny	280	1000	800	1,800
Total	566	1,823	1,608	3,431

Figure 20 – Demographic features of the site

Source: adapted IFRI protocol and the Twi Yahbra Strategic Plan 2013-2030.

The principal means of communication in the Block is the main Puerto Cabezas-Waspam road that can be used all year round. Furthermore, the Wawa River and the numerous streams found in the Block also form an important communication network for the communities.

### *Historical perspective of the settlement*

According to various sources, the site was settled at the beginning of the 17th century with the foundation of two ‘mother’<sup>33</sup> communities: Auhya Pihni (in approx. 1659) and Sangnilaya (in approx. 1750). Within the framework of the Harrison-Altamirano Treaty between Nicaragua and Great Britain, Auhya Pihni and Sangnilaya were grouped together with 8 other communities<sup>34</sup> to form the Indigenous Territory of ‘Diez Comunidades’. This territory was inscribed in the Public Registry of Real Estate of the Department of Zelaya in 1905 to exercise dominion over an area of 20,000Ha, as stipulated in the Title. This area involved the communal areas defined by each community that formed the Territory at the time, but it was not continuous (see Figure 21). In addition, during that period, a man of Canadian origin, married to a Miskita, bought<sup>35</sup> a holding on the banks of the Wawa River that was also inscribed in the Public Registry and titled (see *below*).

The 1940s and 1950s were characterized by the rise of an ‘enclave economy’ in Nicaragua, especially in Moskitia. Within this period, various transnational corporations moved into the Atlantic Coast of Nicaragua with the aim of extracting forest and mineral resources from the site (in particular mahogany, pine, gold, and to a lesser degree, copper, zinc and lead). These corporations installed infrastructure for the extraction of NR: to this end, they constructed access roads and paths that still exist today and form the basis of the terrestrial communication network of the Region, and in some cases have been improved (the majority roads in the site were constructed in this period, in particular the Puertos Cabezas-Waspam road). Around their centers of operation, the workers of the corporations settled and established new settlements.

<sup>33</sup> During the fieldwork, community people often referred to ‘mother’ and ‘daughter’ communities, to distinguish communities of the Block and emphasize the high level of kinship within and between communities. An analysis of these relationships would contribute to a deeper understanding of the internal power relations and consequently, of the local governance in the Block.

<sup>34</sup> The communities that initially formed part of the territory were Krukira, Tuapi, Bilwi, Kamla, Boomsirpi, Kuakuil, Sisin, Auhya Pihni, Sangni Laya and Kwiwi Tingni.

<sup>35</sup> The transaction was probably realized between the Territory’s authorities and that individual.

It was within this context that the Nolan Company and the NipCo (Nicaragua Long Leaf Pine Company) moved into the site in the beginning of the 1940s to extract timber, particularly in the Auhya Pihni and Sangnilaya communal forests. The establishment of these companies was accompanied by significant changes. For one, the site was being populated by employees of the companies (including foreigners and those from the Pacific), which facilitated the formation of new ‘daughter’ communities: Panua is an example of such a community, as explained by elders during fieldwork. Moreover, natural population growth in the ‘mother’ communities, combined with immigration from other regions in the Atlantic Coast and the Pacific that was motivated by the national policy of agrarian colonization at that time as well as by the existence of job opportunities brought by timber corporations, together resulted in the formation of new communities (Butku, Auhya Tara and Itara). These communities were located among the ‘mother communities’, and according to fieldwork, although these communities were formed not only by native people originally from ‘mother’ communities but also from an outside population, they were still considered as ‘daughter’ communities of Auhya Pihni and Sangnilaya and therefore solicited annexation into ‘Diez Comunidades’. However, the ‘mother’ communities continued to consider that the whole area was their own dominion, which up until today has created tensions between ‘daughter’ and ‘mother’ communities in the site. In the workshop carried out in Auhya Pihni for instance, the leaders claimed that *“all of the NR in the SIPBAA Block belong to us, and for that reason, making a map of only this community would make no sense as we consider that the map of NR would cover all the other communities except Sangnilaya, which is a different ‘mother’ community”*. This statement clearly shows that control over NR, not only with outsiders but also between the communities of the site, is still a conflictive thematic yet to be resolved.

In the 1960s to the 1980s, besides being affected by the armed conflicts arising at the national level, the situation in the site was marked by various other features. On one side, community people of the site were displaced between 1987 and 1991 and the settlements of the Block were completely destroyed during this period; even though they were reinstalled several years later in their own or neighboring communities, this caused many problems as everyone had to start over. On the other hand, new neighboring communities were created (like Santa Martha), particularly within the context of displacements from the Honduran Moskitia due to conflict, floods and famine in the communities of the lower Coco River, and to resettle ex-combatants. The latter managed to obtain land reform titling, which created much tension with the other communities of the site. In the end, searching for recognition of their rights over NR, in particular land, the communities of the site organized themselves into the ‘SIPBAA Block’. First, they tried to obtain a Title from the agrarian reform, as the people from Santa Martha had done; up until today, although there is no formal document recognizing the rights over NR at the level of the Block<sup>36</sup>, (von Marschalck 2012) reports the existence of a temporary title certificate which is managed by the *Wihta* of Auhya Pihni in the name of the six communities of the site.

In 2000, the CRAAN gave its consent to grant a temporary title to the Territory of ‘Diez Comunidades’, increasing its area from 20,000Ha to 339,900Ha (Twi Yahbra Strategic Plan, 2013). However, the Territory had difficulties finalizing the demarcation and titling procedure because of conflicts that emerged with other neighboring Territories<sup>37</sup> that were also claiming overlapping areas. It was also during this period that the World Wide Fund for Nature (WWF in its English acronym) started to work on forest management in the site (see Box 2).

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<sup>36</sup> The Block is legitimized by the SIPBAA Block’s community leaders and the current authorities of the Twi Yahbra GTI. Some of the external actors who have intervened in the site, like WWF in particular, have based their intervention on the Block, regarding that title as a base for their work, informally recognizing the local legitimization of this territorial subdivision.

<sup>37</sup> Awas Tingni (75,470Ha of overlapping áreas with Diez Comunidades), Wanki Twi (97,517Ha), Wanki Maya (4,425Ha), Karatá (6,544Ha), Twi Waupasa (4,500Ha), Tasba Pri (20,973Ha) and Táwira (20,000Ha).

#### Box 2 –WWF and community-based forestry in Nicaragua

WWF introduced the community forestry model in Nicaragua to engage community-based associations (English acronym CBOs) in sustainable timber extraction, in particular in the context of its SmartWood Program. This Program benefited from the support of several organizations, among which the World Bank and the Forest Stewardship Council (English acronym: FSC) which has been promoting certification of well-managed forests and the use of certified wood over traditionally harvested wood. Both the concept of the community forestry model and the organization and planning of activities were developed within the framework of the World Bank's PROFOR project, which financed the creation of CBOs to engage in the initiative, with the support of the Nicaraguan Government. In the RAAN, various indigenous communities, including the ones forming the Block, organized themselves and created CBOs to participate in and benefit from WWF initiative. Technical staff from WWF established their own company, Masangni, which played an important role in contracting, oversight, and community training. The CBOs started to contract with Masangni to obtain the services of a forester to develop and oversee the annual operating plan. In addition, the Mesoamerican and Caribbean Wood Group, Jagwood+, was created to encourage the sales of FSC certified forest products and to open new markets. To obtain certification, the CBOs, including COOSIPBAA R.L., developed strategic plans to reorganize all activities, under the supervision of WWA staff. The WWF initiative also allowed the delimitation of an area of forest by the six communities for which rights to exploit timber were ceded to COOSIPBAA, under a Forest Management Plan.

Source: (Nitlapan 2010)

Within the framework of the WWF initiative, the COOSIPBAA R.L. (see *infra*) cooperative was created in 2002, and was recognized with legal status in 2005 as a “*cooperative society of variable capital with limited liability*” for an “*indefinite duration*”, with the following objectives:

- Promote a business model for the management and exploitation of the broadleaf forest of the communities in the SIPBAA Block, under a CBO model;
- Encourage the sustainable management of NR, in particular engaging in forest certification;
- Develop strategic and investment plans that drive the development of infrastructure and services for the benefit of communities;
- Promote the restoration and preservation of the environment, through the development of environmentally friendly practices;
- Train communities in forest production, marketing of products with quality requirements (social and environmental), and business and management development.

After the WWF initiative ended, relations between community people and COOSIPBAA deteriorated. Disagreements and distrust emerged, in particular concerning the lack of transparency in the redistribution of gains from the sales of timber between the cooperative, the community people, the territorial and regional authorities<sup>38</sup>, especially after Hurricane Felix and the promulgation of the related Presidential Decree which authorized the extraction of trees that came down during the Hurricane and which also boosted illegal logging. Further to this, other conflicts emerged within COOSIPBAA, in particular as some of the members of the board were suspected to have stolen money, equipment, and timber from the cooperative.

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<sup>38</sup> As stated by the Law, the gains from timber exploitation should be divided (see *below*). However, distrust emerged between community people and the higher level of governance after Hurricane Felix, in particular as the accountability for donations received by the GRAAN from international cooperation projects and humanitarian relief has never been shown.

Nowadays, the situation is critical, including from a financial point of view<sup>39</sup>: the level of conflicts is such, that recently the Project ALBA-Forestal<sup>40</sup>, which also works under the community forestry model, decided not to contract with COOSIPBAA but to negotiate directly with the *Wihta* of each community of the Block and bypass the cooperative.

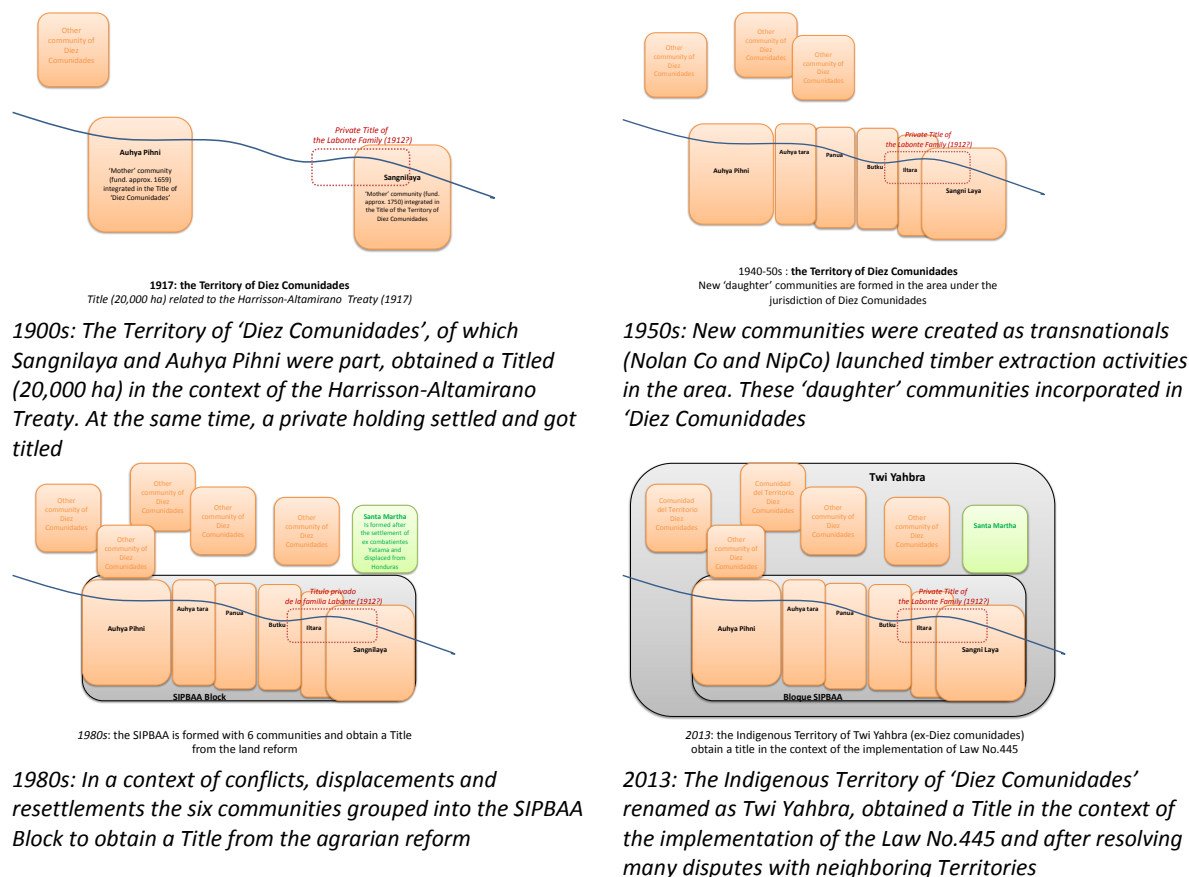


Figure 21 – the main evolution of property rights distribution in the site

Sources: authors

### Social and economic characteristics of the communities of the site

Figure 22 ranks the activities carried out by the communities in the site. The number scheme of 1 to 5 indicates the range of relevancy of each activity, 1 referring to the activity most important for the generation of income, according to the perceptions of interviewees.

<sup>39</sup> According to von Maschalck (2012), a recent report showed that the cooperative is bankrupt: in the last few years, COOSIPBAA didn't manage to make a profit, due to the high costs of extraction activities and the recurring losses caused by climatic conditions.

<sup>40</sup> The Venezuela-led Bolivarian Alliance for the Peoples of Our America (ALBA)

Figure 22 - Principal economic activities and their relevance in terms of contribution to income in the site

	Il Tara	Sangni Laya	Panua	Butku	Auhya Tara	Auhya Pihni
Agriculture	1	1	1	1	1	1
Cattle breeding	5	-	2	3	3	2
Forestry	2	2	3	2	2	3
Independent non-farm activities	3	-	4	-	5	5
Permanent positions	4	3	5	-	-	4
Migration	5	4	5	-	-	5
Small scale mining	-	-	-	-	4	5

Source: adapted IFRI protocol

Agriculture is the main activity for families of the SIPBAA Block. All members of these families participate in agriculture (either using the slash-and-burn techniques in forest areas or planting and cultivating on the banks of the Wawa River). All the families in the communities have access to a plot, which according to the leaders has an average size of 14Mz (about 9.8Ha); of which 3.3Mz (2.3Ha) are cultivated with rice, beans, corn, tubers, plantain, bananas and sugar-cane. While the main objective of agriculture in the Block is the satisfaction of basic needs, a proportion of production, which can be significant depending on the product (see Figure 23), is commercialized in order to acquire other products and goods (oil, salt, soap, and clothes, among others) or to pay for services (education and health).

Figure 23 - Data on products traded by families in the site

	% of families that grow...	% that commercialize...
Rice	71%	75%
Beans	67%	74%
Cassava	22%	22%
Plantains	14%	14%
Bananas	7%	7%
Eddoe (Malanga)	7%	7%
Xanthosoma corm ( <i>Quequisque</i> )	3%	3%

Source: adapted IFRI protocol

Use and exploitation of forest resources is the second most important activity in 4 of 6 communities (see Figures 24 and 25). This category of activity is carried out by 23% of families in the site. Within it, various forest activities can be identified, such as manufacture of charcoal (performed by 9% of families), extraction of timber from broadleaf and pine forests, and collection of firewood (4%). Timber extraction typically occurs during the dry season due to the difficulty of moving trees or round wood during the rainy season when roads are too muddy. The extraction of timber can be classified according to its destination: (1) commercial timber extraction that takes place either through COOSIPBAA in the area of forest under the Forest Management Plan, or through individual activities (6% of families in the site); (2) non-commercial timber cuts that are carried out by families according to their needs, mainly to build and restore houses and communal infrastructure. In general, timber extraction is associated solely with the head of the family (male). In Sangnilaya, 86% of the families sell timber, but in the other communities, that percentage varies, with only 14% of families taking part in the Itara, Panu and Butku communities. Of the families in the site which manufacture charcoal, 77% are from Sangnilaya and 100% of families committed to the extraction of pine and firewood collection come from this community.



Figure 24 – Percentage of families engaging in forestry activities in the site

Type of activity	Il Tara	Sangni Laya	Panua	Butku	Auhya tara	Auhya pihni
Commercial timber extraction	3%	23%	5%	2%	-	-
Domestic timber extraction	-	15%	4%	5%	4%	-
Charcoal	-	31%	15%	4%	31%	-
Firewood collection	80%	100%	80%	90%	100%	80%

Source: adapted IFRI protocol

Figure 25 – Percentage of families commercializing forestry products in the site

Type of product sold	% of families that commercialize...
Charcoal	9%
Timber from the broadleaf forest	23-2%
Pine tree	4%
Firewood	4%

Source: adapted IFRI protocol

The third sector of importance is cattle-raising. According to the fieldwork, 63% of families have at least one cow. Auhya Pihni and Sangnilaya contribute 93% of families with cattle (Figure 26). It is important to mention that traditionally the Miskitu people are not ranchers and that the increase in herds has come about as a result of animals transferred in the context of the 'Zero Hunger' Program. The practice of cattle-raising is based on free-grazing, which can damage crops and generate conflicts between families. Animals are sold infrequently, typically when some type of emergency arises and requires immediate funds.

Figure 26 - Percentage of families with own cattle in the site

	Il Tara	Sangni Laya	Panua	Butku	Auhya tara	Auhya pihni	Site
% of families with cattle	6%	39%	8%	17%	90%	100%	63%

Source: adapted IFRI protocol

The families in the site can be engaged in non-farm permanent activities (in education, health, in COOSIPBAA, as public or project technicians, etc.), non-farm independent activities (crafting, bakery, carpentry, retail, trading of sand-based materials), and artisanal mining (especially in Auhya Tara and Auhya Pihni). Reportedly, few families have members who have migrated; those that do report this mention that they can receive remittances which complement their incomes. As a part of survival strategies, fishing and hunting with self-made weapons and arrows are traditional practices, though in the process of being lost.

According to the fieldwork, the inhabitants of the site mostly define themselves as miskitu (90%) and mestizo (9%) – in some communities, other ethnic groups are mentioned (mayangna and Creoles). In terms of religion, six churches can be found in the site, although none of these have a presence in each of the communities. The most significant are the Moravian church (in 5 out of the 6 communities, not present in Butku), which is visited by 70% of the population of the site, and the Catholic church which 23% of the population of the site visits. Butku, which is the only

community with a marked mestizo group, is entirely Catholic. Religion has a central effect on social relationships as the community members generally use these encounters as informal ways to share information and to socialize, beyond the spiritual interest or meaning that they hold.

Like most of the communities in the RAAN, those in the site lack electrical power (only Auhya Pihni has electricity, supplied by Bilwí), drinking water and sewerage systems. Drinking water is usually extracted from wells that were constructed through projects. All of the communities in the site have primary schools whereas secondary education only takes place in Auhya Pihni. The communities that have a health center are Auhya Pihni and Sangnilaya. The communities have different points for multi-family use of latrines, although many of those lack of maintenance.

### *Administration and local governance structures*

Like many indigenous communities in the RAAN, the communities of the SIPBAA Block are administrated and governed by various structures at differing levels:

- Being located in one of the two Autonomous Regions of Nicaragua, many administrative issues are governed by the Governor of the RAAN and the Regional Council (CRAAN), even though some important matters (such as Defense for instance) are still the responsibility of the Central Government in Managua. Among the structures of importance relating to NR administration within the CRAAN are found the SERENA, the CCF-A and the CONADETI (see *below*). However, *“with little funding or power, and not without accusations of corruption, [the CRAAN and the GRAAN] failed to maintain broad-based support among the citizens of the Region”* (Larson, 2012).
- As in the rest of Nicaragua, the RAAN is divided into municipalities. The Municipality of Puerto Cabezas, to which the SIPBAA Block belongs, developed a 10-year Strategic Plan in 2002 in which NR and environment management appeared as a top priority. However, the fieldwork suggested that the Municipal Government is not very effectively engaged in local NR governance; although, one should recall (and it is significant) that the municipal jurisdiction of Puerto Cabezas covers more than 6,000 km<sup>2</sup> with a population estimated at more than 66,000 persons.
- The communities of the Block, as mentioned, are part of an Indigenous Territory (‘Diez Comunidades’ or ‘Twi Yahbra’, which is governed by a GTI (see *below*). In the case of ‘Diez Comunidades’, the President of the GTI is also the Territorial *Síndico* i.e. with responsibility for administrating NR in all the indigenous communities within its jurisdiction, in coordination with a body of support made up of the *Wihitas* of each community in the Territory;
- At the community level, the model of local governance specific to indigenous communities applies, but as previously mentioned, it is the *Wihita* (and not the *Síndico*) which is elected by the communal assembly and presides over a community government, and who has a key role in the administration of the community’s NR. The *Wihita* is supported by other local figures of power: the elders<sup>41</sup>, church pastors, midwives, and school directors, who, although unelected, have a voice and a vote within the community assembly.

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<sup>41</sup> In part simply for being the oldest members of the community, but above all for being at the head of the *kiamka*, the elders have an important role in decision-making in the community. In no way do they form a Council of Elders that would form a socio-political unit that would meet in secret to deliberate a situation in order to offer solutions - as presented in the bulk of academic literature. At the most, the elders act like traditional leaders, with personal and family interests.

### Key stakeholders engaged in local NR governance



Figure 27 – Venn diagram made in four communities of the SIPBAA Block

The level of importance and influence of actors in the local NR Governance is indicated by distance to the center of the circle which represents the community.

Source: @Fréguin-Gresh, adapted IFRI protocol

### Community leaders and local decision making structures

The community leaders are the most influential stakeholders in local governance, and especially in NR Governance (see Figure 27). In particular, the role of the *Wihta* and the elders is decisive, according to the fieldwork. Other figures of local power and/or respect are highlighted in Figure 28, all of whom belong to the Community Committee.

Figure 28 – The important and influential stakeholders in local NR governance in the site

	<i>Wihta</i>	Elders	<i>Wihta</i> deputy	COOSIPBAA	Church representatives	Local women association	School teachers	Education responsible	Health responsible	Sport responsible	Culture responsible	NR responsible	Farming cooperative	Sewerage Committee	Religious committee	Communal Police	Midwives	Mediation Committee
Iltara																		
Sangnilaya																		
Panua																		
Butku																		
Auhya tara																		
Auhya Pihni																		

Source: adapted IFRI protocol. In grey, actors that were mentioned in the community

Figure 29 presents the main responsibilities and roles in NR management of the leaders and main local figures of power in the communities in the site.

Figure 29- roles and functions of community leaders within local NR Governance

Community assembly	The community assembly is the maximum authority in decision-making and local governance in general and in particular in the NR governance: for e.g. the decisions regarding the allocation of land to community members or the granting of NR exploitation permits for commercial forestry, are to be approved in communal assembly
<i>Wihta</i> and his/her deputy	The <i>Wihta</i> (and his/her deputy in his/her absence) administer all the issues of the community, in particular social issues (resolution of conflicts within community members or with outsiders), political and legal issues (the <i>Wihta</i> is the official representative of the community against the other state officials at various levels) and regarding all matters with external actors. He/she shall authorize productive activities in the community (for both commercial and non-commercial purposes), and apply sanctions when infractions occur
Elders	The Elders are consulted for important decisions that are discussed during the Communal assembly. Their opinions have significant weight in decision making in general and they have even the power appoint, reelect or remove local leaders from their positions
Communal Police	The Communal Police are in charge of the application of the sanctions decided by the <i>Wihta</i> and the communal assembly They are also charged to compile information about infractions, and damage done in the community
<i>Tasba Lalka</i> / responsible for NR	In some communities, there is a responsible for NR who carries out, to a lesser degree than the <i>Witha</i> , some responsibilities in the administration of NR
Sectorial responsible for natural resources, culture, sport, Water, Health, Church, Education, Women, etc.	These local figures of power actively participate in decision making that occur in the communal assembly. They are influent and important actors

Source: adapted IFRI protocol

## COOSIPBAA

COOSIPBAA R.L. is a CBO that was formed within the framework of a WWF project in 2002 (see *infra*). Since its creation, COOSIPBAA has received support from various projects, in particular from a German cooperation organization (GIZ). Currently, COOSIPBAA is composed of 23 members who are all native community people from the site<sup>42</sup>. Initially, 13 members were incorporated into the cooperative, after being named in a community assembly, to represent all of the community members. Indeed, the rights over NR in the indigenous communities are held by all community members in their communal jurisdiction and are not to be transferred, and for that reason, only holders of rights could integrate into COOSIPBAA. However, during the fieldwork, an ex-president of the cooperative claimed that “*the cooperative does not belong to the communities, it belongs to the members of the cooperative*”, making a difference between the rights holders and the cooperative, and emphasizing that in order to exploit the forest, the signature of the *Whitas* is necessary.

According to the fieldwork, the members of COOSIPBAA are representative of the population of the site in terms of their level of education, wealth, ethnicity, and party politics (FSLN and Yatama). This latter factor is especially important as through alliances or opposition with active members of one or the other political party, benefits can be awarded, or conversely, denied to the cooperative (as was the case in the past, as stated during fieldwork). Indeed, the board of the cooperative cannot be dismissed for poor management or any other reason, as in order to be a part of the board, it is necessary to have received training in management of cooperatives (which is mandatory, as the Law states that to be a member of any cooperative, one should have received such training), and the current 23 members are the only 23 people in the communities to have had received it. This situation permanently fixes the composition of the board, and has caused conflicts and tensions between the members and the rest of the community people who consider that this situation has generated a basis for inequality in the redistribution of the benefits arising from exploitation of forests. The board does not meet regularly; a situation that, according to fieldwork, is due to lack of money; when meetings are organized, the low level of participation of the members of COOSIPBAA is highlighted. The cooperative maintain financial registers. The financial administrator of COOSIPBAA makes the registers available to the members and normally presents them to the members once a year.

COOSIPBAA should, in theory, be one of the most influential stakeholders in the Forest Governance of the site. However, due to the tensions and conflicts that exist, the cooperative was barely mentioned as an important actor in 2 out of the 6 workshops organized: COOSIPBAA was mentioned in the community where it has its administrative and operational headquarters, and in another where the members of the board live. In the end, this situation reinforces the idea that COOSIPBAA has not managed to meet the expectations of community members, who perceive it as an external actor which is not legitimate and that does not represent them, making use of THEIR resources, without providing any collective benefits.

## *Representatives of State authorities and agencies*

According to the fieldwork and as previously mentioned, the representatives of State authorities and agencies at the community level have very little presence. This situation brings about a lack of awareness of the possible mandates and responsibilities that they have in terms of NR administration, and limits the extent to which they are taken into account in decision-making and NR Governance at the local level. Consequently, though some of them obviously

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<sup>42</sup> The process had to involve, in theory, a limited group of community representatives from each of the communities in the site, who not only saw the forest from the timber extraction point of view, but also from the perspective of conservation of the forest area, in a way in which the benefits derived from timber extraction would be shared and enjoyed by all communities.



have influence in design of formal rules at the national level, only a few of them are important in local NR Governance, as suggested in Figure 30 and 31.

Figure 30— Roles of State authorities and agencies in local NR Governance

	Roles in the local Governance of NR at community level, following the fieldwork results	Relationships and interactions with community people
GTI of Twi Yahbra ('Diez Comunidades')	<p>The GTI is the legal authority at the level of the Indigenous Territory of 'Diez Comunidades' and for that reason, its role is to administrate the Territory. The GTI played an important role in coordinating with CONADETI to obtain a title for the Territory and in negotiating with the other Territory when conflicts relating to demarcation appeared</p> <p>As the President of the GTI is also the <i>Síndico</i> of all communities within its jurisdiction, the GTI can authorize the granting of NR concessions and exploitation permits, after having agreed with communal leaders</p>	<p>Interactions with the local leaders are frequent, as all the <i>Withas</i> of all the indigenous communities within the jurisdiction of the Territory shall participate in the territorial assembly where some of the important decisions regarding administrative issues of the Territory are taken.</p> <p>The GTI visits the communities periodically (the President mainly visits the communities before elections).</p>
Municipal government of Puerto Cabezas	The Municipal government in the RAAN has little power in decision making in the RAAN, essentially due to the Statute of Autonomy of the Region and in particular since GTI have been created. Consequently, the Municipality essentially attends the urban citizens of Bilwi. However, the Municipality has a recognized role in the maintenance of infrastructures (in particular roads) and give some talks in the communities about environment protection	Very little interactions with the community members, except when inhabitants need to realize some administrative procedures. Coordination with the local leaders, and visits only hint at the implementation of projects.
CRAAN (and SERENA)	The CRANN, as well as the SERENA, are quite absent in the local NR governance. Their role only relies in attracting NR-related projects and facilitating the presence of external actors and NGOs in the Region	Very little interactions with the community people, mostly through community leaders with whom the Municipality coordinates
MARENA	Its role only relates to the establishments of partially implemented national regulations, in particular related to forest conservation. MARENA gives talks on this topic in the communities. Its role was mentioned during fieldwork, in particular regarding the regulation of the closed season for forestry and hunting.	Very little interactions with the community members (only in Sangnilaya, interactions were mentioned related to administrative procedures regarding forest exploitation). Sporadic presence and irregular visits in the communities (2-3 times a year max). Coordination with the local leaders ( <i>Witha</i> )
MAGFOR	Its roles relates to the elaboration of formal regulation relating to land use and forestry	MAGFOR (which is often mistaken with INAFOR) have very little presence in the communities and little interactions with community members (in 3 communities, people had to deal with administrative procedures related to agriculture and forestry with MAGFOR). Coordination with the local leaders ( <i>Witha</i> )
SINAPRED	SINAPRED provide to community people training on the prevention and mitigation of natural disasters	It coordinates with the local leaders ( <i>Witha</i> )
INAFOR	INAFOR plays a role in the regulation and the administration of NR, in particular in tax collection (related to commercial forestry). INAFOR also organizes talks on uses and management of forest resources. INAFOR participates in the formation of voluntary firefighters and forest wardens	Little direct interactions with community people, but coordination with the local leaders ( <i>Witha</i> )
Nuevo FISE	The FISE provides support with drinking water-related projects and provides seeds to community members	Little direct interactions with community people, but coordination with the local leaders ( <i>Witha</i> )
CONADETI	It played an important role in the demarcation and titling process	No direct interactions with community people

Source: adapted IFRI protocol

Figure 31 –Importance of State authorities and agencies in NR Governance at the local level

	GTI	Municipal Government	MAGFOR	INAFOR	MARENA	CRAAN	CONADETI	SERENA	SINAPRED	Nuevo FISE	National Police
Importance	++	+	-	+	-	-	+	-	-	+	+
Iltara											
Sangnilaya											
Panua											
Butku											
Auhya tara											
Auhya Pihni											

Source: adapted IFRI protocol. In grey, actors mentioned in each community

*External stakeholders: NGOs and representatives of international cooperation/aid organizations*

Although the social and organizational history of the communities in the site shows the important role performed by various external stakeholders in local NR Governance (for instance WWF), at present, there are few that work in the site and play a role in this area. However, as shown in Figure 32, there is an important diversity of interventions by external actors mentioned by the local leaders in the Block. These NGOs or representatives of international cooperation/aid organizations have varying levels of presence in each community, determined by the financial capacity of each of those organizations and their work proposals. However, despite many projects working on similar themes, there is generally no synergy between actions and the local leaders have not managed to coordinate actions, which on many occasions are duplicated or repeated.

According to the fieldwork, the external actor who has some level of importance in local decision-making is Plan Nicaragua, which brings support to children in terms of health, education, and food security. Various projects relating to the management of drinking water were also mentioned, as projects important to the community. In the local NR Governance, WWF and its former project that created COOSIPBAA was also mentioned, but as there are a lot of conflicts and tensions on this regard, people did not consider this stakeholder as an important one for the community. It is also worth mentioning the distrust that many community members have due to the fact that in the past, according to the fieldwork, some external actors and in particular private companies, engaged in projects related to the exploitation of NR (especially for the extraction of gold – the firm Gold v2 was mentioned), offering compensations to the community in the social sphere, while in the end they only exploited resources, without any of the concrete benefits promised for the communities.



Figure 32 – External organizations present within the SIPBAA Block

	Water Aid	Agro Acción Alemana	Plan Internacional	Nitlapan	Pana pana	(World Food Program) PMA	Masangni	CEDEHCA	AMICA	Palabras y Hechos	Mesoamerica	URACCAN	BICU	ALBA Forestal
Iltara														
Sangnilaya														
Panua														
Butku														
Auhya tara														
Auhya Pihni														

Source: adapted IFRI protocol

### Local practices and regulation of access, use and exploitation of NR

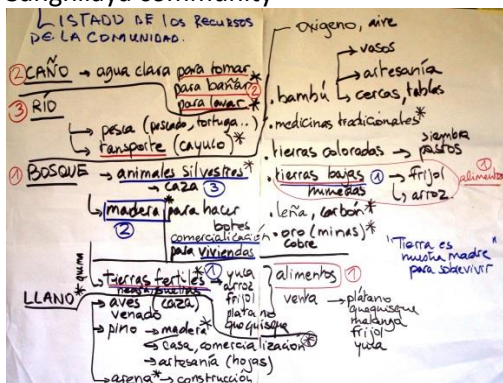
Figure 33 – Pictures showing the results of the participatory workshop in Sangnilaya



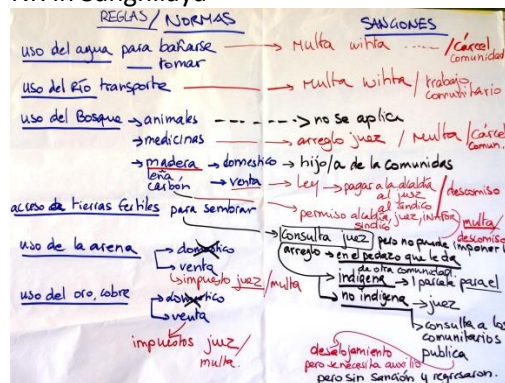
Socio-spatial map of distribution of the NR of the Sangnilaya community



Key stakeholders in decision making related to NR in Sangnilaya



Practices of uses and exploitation of NR in Sangnilaya



Rules in use, sanctions and key actors engaged in those rules and their implementation in Sangnilaya

Source: @Fréguin-Gresh, adapted IFRI protocol

Figure 33, while showing the results of the workshop carried out in Sangnilaya, provides an overview of the institutions that govern the access, use and exploitation of NR across the site. The first photo, top left, shows a diagram which displays and ranks the NR according to a gender perspective (the numbering indicates the importance of each resource to community members, in blue from the point of view of the men, and in red, the women). In this way, the importance of agricultural land which allows food production for family consumption is highlighted (1st position for both genders). The forest (2nd position for men) also provides an area for cultivation, as well as timber for sale and for construction of houses and boats. In addition, the forest provides food (through hunting, in 3rd place for men). The water in streams and rivers has crucial domestic functions (drinking water, bathing, and cooking, etc. - 2nd position for women) and as a means of transport (3rd position for women).

In order to govern the access, use and exploitation of resources, various rules in use, both formal and informal, apply. The top right-hand photo shows the diagram made by participants of the workshop in Sangnilaya. The resources regulated are those with a value on their use, trade, or conservation. Generally, rules governing their use and exploitation are a combination of formal rules that were elaborated at national or regional level, which are locally interpreted by the *Wihtas*, and informal rules established by local leaders. Rules in use are always sanctioned through the *Wihtas* with the support of the Elders, who assess each case and propose an adaption of the sanctions according to the respective measure, and of the Communal Police.

The main sanctions applied are: community work (offenses of a lesser degree), fines (generally monetary), and the confiscation of resources with the value of the sale (e.g. for illegal sale of timber or in the case of reoffending). When the infractions are considered as serious crimes affecting community members (e.g. use of chemicals in fishing), sanctions vary from suspension of access and usage rights and community jail, to referral to be processed by municipal or national authorities (Police, Municipal Government, INAFOR, according to the type of offense).

### *Land*

According to the fieldwork, land is the resource with primary importance for the communities (as stated by community members: “*the land is our mother and we need her to survive*”). The fertile land has been classified into four types: (i) the *black lands*, on the banks of the rivers (particularly the Wawa), which are exposed to floods, and where staple grains (rice) are cultivated and domestic animals (chickens, pigs, and cows) can be left to graze freely; (ii) the *colored or red land*, in the Plain, where dwellings are established and where animals can graze; it is also on these lands that hunting takes place; (iii) the *wetlands*, located in broadleaf forest, an hour or more on foot from the settlement, where communities set up their “*fincas*” (Spanish for farms), grow tubers and roots, bananas and plantains, grains (rice) and beans, fruits (peach palm, orange, mango, pineapple, sugar cane, cocoa), and let their animals graze; and (iv) the *rocky land*, in the Plain or on the river banks, where sand and rocks or other construction material can be extracted. In some communities (Butku and Itara), several families have also established pastures in the south-west side of the river Wawa and raise cattle there.

In agreement with the Constitution and Laws No.28 and 445, since the communities of the site are indigenous, their land has communal tenure. Accordingly, the native families and their partners<sup>43</sup> can access land in the area of their community where they have the right to set up a house, cultivate, use and/or exploit the corresponding NR, meaning that families can benefit from the allocation of a plot of land and consequently have the right to exclude the other families of the community from this plot for an undetermined period of time. Under the rules in use in the site, a

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<sup>43</sup> In the case of ‘partners’ i.e. people who have married a native of the community, they can acquire rights to resources after having lived some years in the community and having convinced the communal authorities. However, in the case of a partner being the husband of a native woman, he has *de facto* rights in his family, given that it is often the man that makes decisions, particularly in agricultural activities.

family can access a plot of land in the jurisdiction of its community, if that plot *“is not the domain of another family, in particular after its allocation from the communal authority”*. Firstly it is necessary to identify the available areas before requesting the allocation of a plot from the *Wihta*; in this regard, during the fieldwork it was indicated that *“if you are the son [native] of a community, you know where you can set up your home and a plot for cultivating”*. The decision to allocate a plot of land to a family of the community is taken during a community assembly and enacted by the *Witha*. Following the decision on allocation, the plots fall under the dominion of families in the community, a situation that is recognized and legitimated by the others since *“they don’t have the right to work with or make use of the resources [especially trees] that are found on a plot of land which other community members have worked, even if years have passed since then”*. However, according to the rules in use mentioned during the fieldwork, families who acquired a plot of land in the community don’t have the right to transfer this land to anyone else nor the right to grant a permit of exploitation of the corresponding NR to someone else, as this decision is subject to the approval of the communal assembly, and above all, they do not have the right to alienation (by Law, it is prohibited to sell, rent or mortgage a land under communal tenure). The allocation/appropriation of plots at the family level is done with two purposes in mind: (i) the construction of a house (mostly where the settlement is located) (ii) the development of farming activities. In the case of agricultural plots, families having acquired a plot of land internally redistribute the usage rights between members, according to informal intra-family agreements.

Nevertheless, local rules in use also legitimate an area of the site that benefits from a private tenure (see Box 3), recognized by the community leaders and all community people. Over this area, the *Wihta* does not exercise his powers (allocation of plots and application of sanctions) and in this private area, only the members of one family have rights, can build their houses and develop farming activities. It is this family that regulates the access, use and exploitation of all resources found in there.

### Box 3 - The private land of the family L.

According to various sources (García-Babini 2012; von Marschalck 2012) and the fieldwork, a man of Canadian origin called Joseph Napoleón L., who married to a Miskita womena that was native to another community of the Northern Plain, settled at the beginning of the 20th Century in the site in an area that currently falls under the jurisdictions of Sangnilaya and Itara. This couple acquired 350Mz of land (246.5Ha) on the banks of the Wawa River, a land that was registered as a private property in the Public Registry of Real Estate of the department of Zelaya, and were granted a title of private ownership. The couple had three children (two boys and a girl). At the time of his death, L. had not made a legal testimony which assigned the rights to his land to a specific person, and his children decided to commonly usufruct the area and its resources, keeping with the traditional indigenous system of rules for allocation to family members, but in this case, restricted only to family members. The two sons died and the rights passed into the hands of the only daughter, who up to this day, is the right (and title) holder and administers the area, assigning parts to family members to settle and cultivate. The community authorities don’t exercise any control over the area nor its resources. A demonstration of this is that the L. family imposes taxes on the other community members (even though in theory they have communal rights) when they want to make use of the resources offered by the land (trees and agricultural land, but also firewood).

It is worth mentioning that regulation of the exclusion of outsiders to the site continues to be problematic. The persistency of invasions of land by *mestizos* was mentioned, especially in the area of broadleaf forest (particularly in the South-west, in the part adjacent to Tasba Pri). Even though an attempt has been made to report these invasions to the Municipal Government and to the GTI, sanctioning and eviction of the invaders have not been effective. According to the fieldwork, the community members, led by their *Wihtas*, decided in communal assemblies to organize themselves into patrols in their communal jurisdictions. Without the consent of or the support from the Municipal Government, the GTI, the National Police nor the Army, they have begun to evict *mestizo* families that

have settled there, and hand them over to the Police. Still, the invasions have continued, recently led by lone armed men, determined to stay on the land they invaded. Faced with this situation, the community members feel abandoned and, again, are thinking about evicting the armed invaders. The situation is indicative of the tensions that exist, and the difficulties communities face in enforcing their rights.

In terms of regulation of the (changes in) uses of the soil, there are no specific rules other than a combination of various laws and community rules whose outcome is the prohibition of burning land outside of the “farms” in the forest, since they traditionally practice slash-and-burn techniques, except in the case of settling of new plots. Use of chemicals is also prohibited. It is worth noting that problems with fires were mentioned, especially in the Plain where the problem is a recurring one.

### *The forest and forest resources*

The forest offers much more than a space for agricultural land (see Figure 34). It is an important reserve of wood and bamboo, fuel sources (firewood, charcoal), plants used in traditional medicine or ancestral rites, a means of generating income for communities (sale of timber or handicraft), a food source (from hunting and collection of wild fruits), and a source of means of materials for transport and furniture, and construction materials for housing.

As is the case for other land, forestland in the site falls under a communal tenure. Each community has dominion over an area of broadleaf forests and/or pine tree forests, in which, when outside of “*fincas*” allocated at the family level (see *below*), the native population of the communities and their partners can make use of the forest resources, according to the rules in use that are a combination of formal rules and those established by community authorities.

#### (i) Timber

The community members have the right to freely exploit timber in the non-allocated forestland in the pine tree and broadleaf forests. The legal base for this is Law No.445, which also establishes that the *Wihta* is responsible for the regulation of the harvesting of timber (without distinction of species). Law No.445 does not set a maximum quantity of extraction (by family or by community), nor a distribution of the total amount of timber extracted between domestic and commercial purposes. The communities in the site can relinquish rights to exploitation to third persons, with the authorization of the *Wihitas*, “*provided they are instructed to do so by the communal assembly*”. However, it must be emphasized that, because in the site the President of the GTI also has the mandates and responsibilities of a *Síndico* (see *infra*), confusion can occur at the time of granting forest concessions or timber extraction permits to third parties, generating conflict with the community authorities.

Regulation of the extraction of timber differs according to the location of the resource:

- In what would be considered “*virgin forest, it is prohibited to deforest*” and fell trees, as stated in various national Laws. This formal rule, however, effectively does not apply at community level since the community members consider that there is no virgin forest left in the site following the period of the 1940s-50s in which it was greatly exploited (perhaps too much), in particular for species such as mahogany and cedar. However, community members, while recognizing that, mentioned during fieldwork that exploitation of some “mother” trees (the elder trees found in the broadleaf forests) is not permitted by the informal community agreements and norms;
- In the Plain, where the pine forest is found, forest exploitation is highest as pine is a species much less laborious and costly to extract than broadleaf species. Pine exploitation is carried out at the individual/family level, for the purpose of construction and reparation of housing (pine posts are used as the basis of houses), of the manufacture of furniture and fences, or for commercial purposes, in which case



the community member must obtain an authorization from the *Wihta* (according to the Forest Law and in coordination with INAFOR) and pay a local tax for extraction. Due to a lack of clear limits between the communities, there are conflicts over the extraction of pine in the Plain, particularly between Panua and Auhya Tara, Panua and Butku, and between Itara and Sangnilaya;

- In the broadleaf forest, two sub-areas can be distinguished in each community, outside of the areas where the dispersed “*fincas*” are found: (1) an area of common use in which all community members can extract and make use of timber for commercial or domestic purposes; (2) an area that is in theory reserved for timber extraction by COOSIPBAA, which is regulated by the Forest Management Plan. In the two areas, the species most extracted are: *nancitón*, *santa maría*, and mahogany, all of which reach higher prices than pine but also generate higher extraction costs.



*Traditional houses in the site, built with pine post as the basis of the house*



*Timber extraction from the site, that are transported by truck to Bilwi*



*Inspection of INAFOR in the municipality of La Dalia (timber probably extracted in the RAAN)*



*Young Miskito boy on his way to collect firewood in the site*

**Figure 34 – Pictures illustrating the uses and exploitation of forest resources**

Source: @Fréguin-Gresh

As previously stated, in the 2000s the communal authorities in the site agreed on the delimitation of an area of common use, in which administration of timber extraction was transferred to COOSIPBAA under the agreements established in the Forest Management Plan. This area represents 12,842.36Ha (approx. one third of the surface area of the site). According to the fieldwork, participation of community members in the development of the Plan, led by a forest technician from WWF, was very limited: only 10% of the community members participated effectively,

mostly the *Wihtas* (among whom there were women and persons that were less than 40 years old) and the Elders. Currently, the Plan is neither respected nor applied. Besides the conflicts between community members and COOSIPBAA, there are also conflicts with neighboring communities (such as the communities of Prata and Betel, outside of the site) who are claiming part of the forestland falling under the Plan to make use of the forest and extract gold. This situation is related to the absence of formal limits between communities and the on-going process of demarcation of the Territory, as up until today only ancestral agreements exist, which in some cases leaders are unaware of.

(ii) Sources of fuel

The community people in the site traditionally use firewood as a source of fuel for domestic purposes. More recently, they started to extract pine trees which they turn into charcoal for commercial purposes (there is a high demand for charcoal in Bilwi). The only informal rule of use that exists relating to the recollection of firewood and the processing of charcoal, since these resources “*belong collectively to the communities*” (except in the area falling under the private tenure regime<sup>44</sup>), aims at limiting the amount of firewood collected or charcoal processed (the limits are negotiated on an ad hoc basis). This rule is applied by the *Wihta* who can “*draw attention to this and impose taxes*” if for instance someone is found responsible for the commercialization of large amount of charcoal, although as all community members are considered as the “*sons of the community*”, sanctions are barely applied.

(iii) The picking of medicinal plants and those used in ancestral rites, and of leaves used for handicrafts

In the Plain, pine needles, pine trunks and other wild plants found in forests are used in traditional medicine; other wild plants used in ancestral rites are also collected. There are generally no rules on access and use of these resources.

(iv) Hunting of wild animals and picking of wild fruits

As already mentioned, there is a wide variety of wild animals and plants (including fruit trees) in the site, even though the quantity has been drastically reduced over the years due to (over)use of the forest, damage caused by Hurricane Felix in 2007, and repeated forest fires (in the Plain). Still, picking of wild fruits and small-scale hunting of wild animals (birds, reptiles, and deer) continue to be commonly practiced in the site. These practices allow community people a crucial supplementation of their diet (as well as fishing, see *below*). By Law (sanctioned by MARENA in collaboration with the *Wihta*), there are closed seasons for hunting (in particular for iguanas) that shall be applied by the *Wihta*, but regarding other resources, sanctions are barely applied in cases of rules being broken.

### Water

The River Wawa is an important cultural passageway in the site. The waters of the river represent a vital space for the communities: for drinking, cooking, bathing, moving around, exchanging information, catching fish (a crucial source of protein for the population), and many other uses. The water in the site is considered to be for common use, or more appropriately, a public good. The rules in use that regulate water uses above all have the objective of its conservation, although in each community, there are also some informal community agreements, which define places on the river where women and men can bathe separately, as well as places to wash clothes or fish. Other important rules in use are the following: (i) prohibition of the use of chemicals in fishing to limit contamination of the waters (formal rule sanctioned by MARENA in collaboration with the *Wihta*), (ii) prohibition of transporting on the river some timber species that are known to contaminate waters (informal community agreements), and (iii)

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<sup>44</sup> In the past, the Labonte family members have requested taxes from other community people who wanted to collect firewood available in their private area.

prohibition of felling trees on the banks of the river (formal regulation, sanctioned by INAFOR in collaboration with the *Wihta*). These rules are mostly respected and sanctioned.

### *Minerals, sand and stones*

No studies exist which allow for the characterization of the importance of minerals in the site<sup>45</sup>. However, the fieldwork and the literature review demonstrate that minerals here have been and are still exploited (gold in particular). Although attempts have been made by foreign companies (which resulted in serious conflict, especially in Sangnilaya according to comments made by the *Wihta*), there is no large-scale extraction of minerals in the site. Nonetheless, according to the fieldwork, small-scale mining is practiced, particularly in Auhya Tara and Auyha Pihni. In theory, it is the responsibility of the *Wihta* to give authorization for mining in order to control the quantity of mineral extracted, but in reality, there is no such control as the nature of the activity is considered as domestic use (although families practicing small-scale mining generate a significant part of their income from the sale of the gold).

Sand and stones are extracted on a small-scale and correspond to activities carried out either by families that wish to construct their own houses from concrete, or for the construction of schools and health centers within the Block. However, some families have also developed a small-scale trade of sand extracted from the banks of the Wawa River, in particular in Auyha Tara, where the *Wihta* has imposed taxes on this commercial use of construction materials.

### *Final considerations*

The case study in the site of the SIPBAA Block demonstrates important aspects of local NR governance in the N-H SL which, while being specific to the case of the SIPBAA Block, reflect tendencies that can be found in other sites of the RAAN, amongst which are the following:

- According to the current policy and legal frameworks in Nicaragua, property rights in the RAAN are under a communal regime. The analysis provided in the case of the SIPBAA Block confirms that communal property rights are the first institution that govern access, uses and exploitation of NR in the site and that NR under an ‘open access’ regime doesn’t exist in Nicaragua. However, the case study also shows that the situation is not that simple: within the site, or in neighboring communities, even if the jurisdiction of the area should be under communal regime (which was sanctified by a title at the level of the Indigenous Territory very recently in 2013), other land tenures exist, such as individual private property rights (in the case of the L. family) or collective private property rights (in the neighboring community of Santa Martha where rights over resources were transferred to the community members during the agrarian reform).
- Given the history of the settlement of the site, some communities of the site (the oldest ones, which consider themselves as the ‘mother’ communities) claim to have more rights over resources than others (the ‘daughters’) and continue to make use of what the community people from ‘mother’ communities consider to be ‘their’ resources, a situation that obviously generates many conflicts. This situation also highlights that it is not because rights are under a communal regime that they are equally distributed between communities and that it is not because a community has declared dominion over a specific area that its rights (even claimed as “ancestral”<sup>46</sup>) are naturally legitimated by the neighbors, even if for a long time some informal agreements between local leaders had established limits between communities. The

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<sup>45</sup> At the time of its elaboration, the Forest Management Plan recognized the presence of minerals and their potential exploitation and it was decided that the area would remain outside of the Plan.

<sup>46</sup> In that case, « ancestral » should be used carefully as the ‘daughter’ communities were created only 50 or 60 years ago, including by immigrants from the Pacific.



numerous conflicts between neighboring indigenous communities that have appeared during the demarcation and titling process in the RAAN show that this situation is still to be resolved.

- Holding rights over resources under a communal regime does not mean that there is an open-access system reserved for the community members. Land (whether for housing, cultivating, exploiting forests and corresponding resources, etc.) is managed at the level of the families and ‘appropriated’, with the agreement and legitimation of the communal authorities. At the end of the day, what matters is that a family will effectively decide individually on how resources will be used in ‘its’ plot of land. This situation makes it clear that even in the indigenous communities of the RAAN, collective access and use of resources is not the most common way, even if one should recognize that mutual aid or collective communal work (which in some cases refers to sanctions applied at the local level) exist.
- Generally, the rules in use differentiate use/exploitation of resources between domestic and commercial purposes. However, controls are lagging or are difficult to be undertaken: for instance, some families in the site have members in Bilwi and that situation could justify timber being ‘domestically’ used (and not sold) outside the community for construction or maintenance of housing of those family members there; however, how can this purpose for timber extraction can be monitored? Does it justify a special authorization from the local authorities or is it an open door to illegal logging? The fieldwork shows that there are abuses even though the *Wihtas* control, for instance, when timber is exported outside the communities, which requires a permit (it should be noted that the fieldwork also reports cases of corruption in relation to this).
- In the site, which was formed by indigenous communities under a communal property rights regime, one would have expected to find that most of the rules in use were informal community agreements. The case study shows that it is not so, and that most are generally formal and established at the central level (for e.g., one should obtain tree cutting or tree felling permits which should be authorized by the *Whita*, but this situation refers to a formal rule elaborated and imposed by INAFOR). This shows that even if communal authorities are considered as “traditional” governance structures in indigenous communities, in matters relating to NR Governance, they appear to be acting as the community representatives of the Central and Municipal State.
- The field work confirms the absence/weak presence of representatives of the State agencies that have mandates and responsibilities in the administration of NR (such as MARENA, MAGFOR, INAFOR, etc.), and of the local authorities (either the Regional council, the Municipal Government or the GTI) in the site. This implies that these stakeholders, while they are influential in the policy making that supposedly affects NR access and uses, as demonstrated in the analysis of the current state of NR Governance at the national level, are not important actors at the community level, and the formal laws and regulation they elaborate are little known and rarely effectively implemented and enforced. In the case of rules in use governing access to land (which constitute a mixture of formal rules and informal agreements at the community level), the case study shows that rights of exclusion are not respected (e.g. invasions from mestizos in the forestland), which probably has to be seen in the context of the general state of NR governance: state agencies, local authorities, the Police, the Army, etc., lack of means and capacity to effectively exercise their control over the site, which is complicated by the lack of infrastructures of communication, in particular in the broadleaf forests. In this context, community leaders search for alternatives on their own when confronting invasions of the forestlands, a situation that leads to serious conflicts.
- The situation also complicates the legalization of the activities of NR users in the site. If the *Wihta* is the legal figure and authority over NR, he/she cannot attend to and control on his/her own all the activities that occur in his/her jurisdiction. Lacking support from the State agencies and local authorities, he/she cannot be the only responsible for transferring information on the necessary formal regulations and related procedures that in many cases, can only be completed in Bilwi, a town that is between two and four hours

away by bus (which pass only twice a day) from the communities, at costs that community people very rarely have available. The consequence is an increasing risk of illegality, since the community people are forced to establish direct alliances and agreements with timber contractors, intermediaries or forestry companies, which are better informed in legal terms, and have the methods available to convince people (cases of corruption and misuse of power have been mentioned, especially in the trade of timber). In the end, these companies tend to develop illegal activities with the uninformed agreement of the population, who come to be the holders of rights to the resources, but only the laborer in terms of the extraction and trade of timber, with no collective benefit at all.

- The community forest model developed by WWF and including the creation of COOSIPBAA, was developed to fight against this difficult context and to empower communities with new institutions that could sustainably exploit NR for the benefit of the majority. However, this model, which originates in a philosophy of shared management and equitable distribution of the benefit of the exploitation of resources, and which has received the financial support of various external stakeholders, has demonstrated many difficulties that question its sustainability. Based on building the capacity of some representatives of the communities (at that time, the elected leaders or some persons named by the communal authorities) to manage forests, the model fixed the composition of the Board while the overall governance system continued to be very flexible (it is not because a *Wihita* is elected that he/she cannot be dismissed at any time by the communal assembly). The lack of flexibility induced by the model of management generated tensions and conflicts, as the Board could not be dismissed when some of its members were being suspected of embezzlement. This situation led to a non-legitimation of the transfer of the communities' management rights over NR to COOSIPBAA, the non-respecting of the Forest Management Plans (whose rules were established by external actors, poorly known and not recognized by community people) and the fact that the cooperative, which is supposed to be a CBO, is perceived to be administrated by individuals who have no rights nor authorities, and that don't act in the defense of collective interests. This situation seems to have resulted from the failure to foresee inconsistencies between the policy and legal frameworks, and the communal tenure systems of the indigenous peoples. This situation, in the short term, tends to increase illegal logging and forest invasion.

Finally, the case study shows the complexity and challenges of the current state of local NR governance in the site because it disrupts different dimensions of life in the communities: on the one side, people have their own internal processes for governing the access, use and exploitation of resources, which correspond to a model of traditional local indigenous governance and which frequently have been sanctioned by formal rules; on the other hand, there is the necessity to comply with formal rules for commercial exploitation of resources, particularly forests, which involve, amongst other things, respecting the formal national rules, as in the rest of the country; although in the site rights are communal and, supposedly, the resources belong to the indigenous peoples. In the end, collective action showed its limits and did not function to solve the problems, and behaviors have remained individual (at family level), and correspond to each person's individual agency.

*Environmental and geographical context of the site*

The site is also characterized by a tropical humid climate, with an average annual temperature that fluctuates between 23°C and 26°C, with little variation throughout the year, and an average annual rainfall varying between 1,800 and 3000 mm, concentrated in the period from June to January, while the dry season, which is quite pronounced, occurs between March and April.

The topography of the site has two features: (i) a hilly area where the broadleaf forest is found, and (ii) a mainly flat area, which is interrupted by an arc of hills and small mountains. The soils<sup>47</sup> in the site, which are mostly shallow and undeveloped and characterized by little natural fertility and a high content of rocks, are also susceptible to water erosion and range from well drained to badly drained.

The natural vegetation of the site relates to a tropical humid broadleaf forest in which more than 200 species of tree have been identified: San Juan Areno (*Ilex tectónica*), Santa Maria (*Calophyllum brasiliense*), Barba de Jolote (*Cajoba arbórea*), Cumbillo (*Terminalia amazonia*), Rosita (*Hyeronima alchorneoides*), Varillo (*Symphonia globulifera*), Cedro Espino (*Xanthoxylum jamaicensis*), Cedro Real (*Cedrella s.p.*), Marapolan (*Guarea grandifolia*), Sangre Real (*Virola Koshny*), Aguacatillo (*Nectandra sp.*), oak (*Quercus sp.*), Cola de Pava (*Cespedezia macrophylla*), Chicle (*Manilkara zapota*), Nispero (*Pouteria glomerata*), Zapotillo (*Pouteria sapota*), San Juan Peludo (*Vochysia sp.*) and walnut (*Juglans olanchana*), amongst other species. According to the fieldwork, the condition of the forest is considered to be roughly equal to the normal level for this ecological zone. However, it is also recognized that deforestation is still ongoing in some parts of the forestland (see Figure 34). Despite Iriona only having a total population of approximately 10,000 and a very low demographic density (2-3 inhabitants/Km<sup>2</sup>), deforestation has been truly drastic, such that throughout the low parts of the Valley of the Sico and Paulaya Rivers, the landscape is mostly characterized by a large extension of pastures (in Black in Figure 35), which are scattered in some areas with newly established palm-oil plantations<sup>48</sup>. However, in the middle and upper Valley of the Paulaya River, where Copén is located, a large area of virgin forest still exists in the nearby of the Biosphere Reserve of Río Plátano.

<sup>47</sup> The soils of the area originate in metamorphic rock of the Paleozoic period. They are classified as lithosols and lathosols of the Tomalá and Yaruca series, and podzolic soils of the Chinampa series, with the Chinampa series present only in limited areas.

<sup>48</sup> Palm-oil expansion is motivated by the current national agricultural policy and the recent establishment of a processing plant in the community of Bonito Oriental (120 km from Copén).

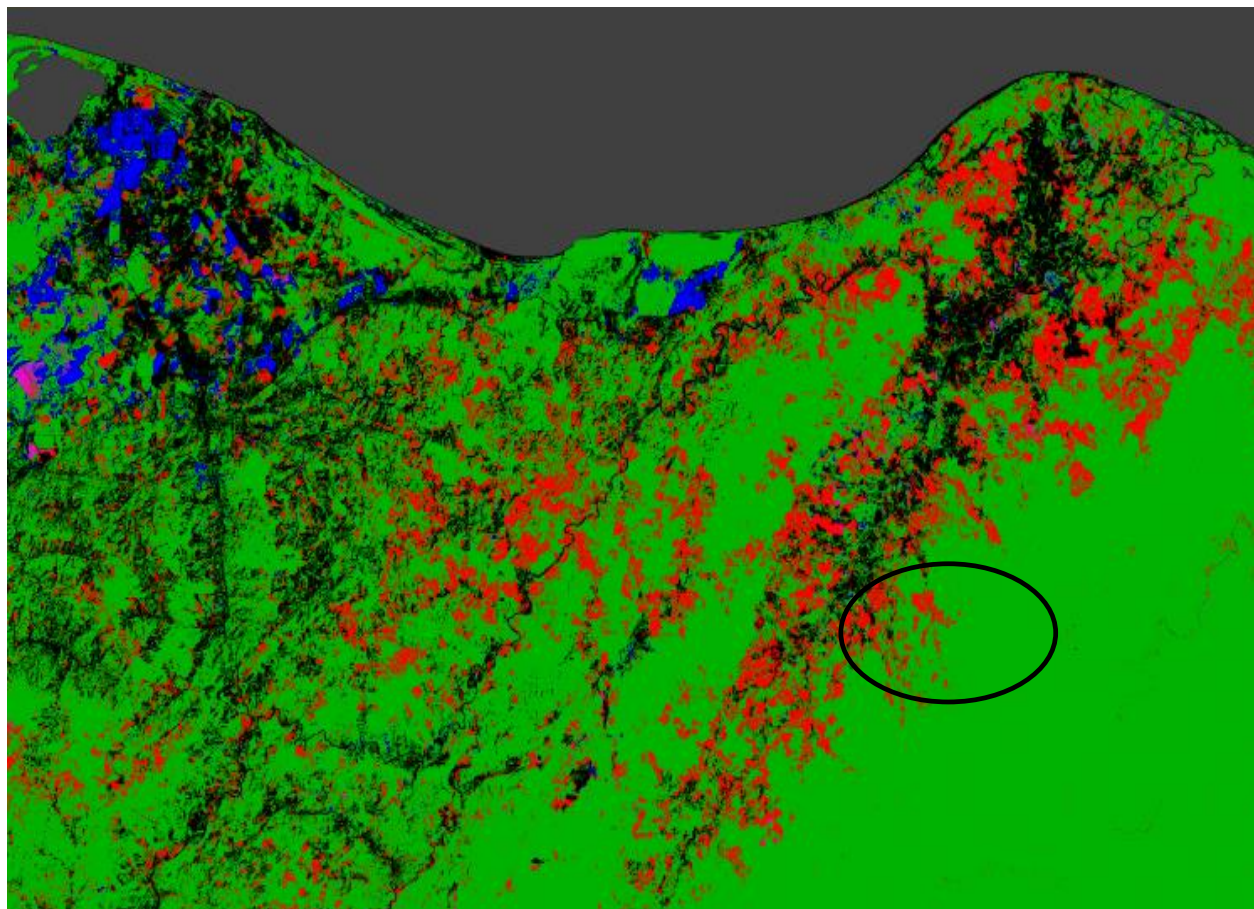


Figure 35 – Map showing the forest coverage and distribution in Copén (identified in the black circle)

Source: <http://earthenginepartners.appspot.com/science-2013-global-forest>

### *Historical perspective of the settlement*

The community of Copén, whose population is 100% ‘*mestiza*’ according to the fieldwork, has a population estimated at 210 inhabitants (about 42 dwellings). The community is arranged as a dispersed settlement, located close to the River Paulaya, which when swollen is navigable. Like all communities in the Valley of the Sico and Paulaya Rivers, Copén is linked with two relatively important settlements of approximately 1,000 inhabitants each: Las Champas and Sico (2 hours away), where traders selling construction materials, mechanic services, tools, groceries and other diverse items, can be found. Here reside traders who have trucks that transport people and take goods produced in the Valley to the main urban centers of Colón, and who import a range of goods into the area.

As a whole, Copén is difficult to access: the roads linking the community to other settlements are only passable by four wheel drives, or if the rain swells the rivers, passage can be possible by boat. In general, community people rarely interact with the civil servants in the closest administrative Centre (Sico); perhaps every two or three months according to the fieldwork.

The history of the department of Colón, in which Copén is located, as for the whole of the Honduran Atlantic oriental region, has been marked by a process of agricultural expansion throughout the 20<sup>th</sup> century. In fact, prior to the 20<sup>th</sup> century, Colón was mostly unoccupied, except at the edge of the Coast, where, since the 18<sup>th</sup> century approximately,

Garifuna tribes had settled to dedicate themselves to coastal fishing and subsistence agriculture, no more than three or four kilometers inland.

A first wave of agricultural expansion in the Department, especially in the Valley of the Sico and Paulaya Rivers, took place around the 1920-30s, when the United Fruit Co. established thousands of hectares of banana plantations for export by removing wide areas of tropical forests. To this end, the company built a railway upstream to facilitate the transport of the produce out of the inaccessible producing region. In this period, the United Fruit organized a double system of plantations, either establishing its own plantations or promoting individuals (both national and foreigners) to open up the forest and establish plantations under contract with the company. In this way, agricultural entrepreneurs established themselves in the area to cultivate and sell their produce to the company and, at the same time, acquired *de facto* rights over the land and the corresponding NR. At that time, the majority of the settlers in the Region were those agricultural entrepreneurs related to the United Fruit's business, and the company staff among which were found many waged-laborers engaged in the maintenance of railways, the construction of drainage ditches, the carrying of bunches of fruit to supply and transportation points, and subsistence agriculture. However, in 1935, the natural conditions of the area, marked by a particularly heavy rainy season that year, led to an enormous flooding of the Pauyala River, which destroyed all the banana plantations and severely affected railway infrastructure and roads. The scale of the catastrophe was such that the United Fruit simply decided to lift up the infrastructure and take it away to establish elsewhere; along with the company, the agricultural entrepreneurs that had established plantations in agreement with United Fruit and a large proportion of the waged-laborers also left. However, a few waged-laborers stayed in the area and formed the settlements of Sico and Las Champas.

A second push of agricultural expansion in the Department began from 1960s under a model of the 'traditional' advance of the agricultural frontier, which is also found in other countries of Central America (like Nicaragua): subsistence small-scale farmers and landless people, seeking a plot to survive, arrive in a virgin area of forest, demarcate and burn a plot, cultivate it with corn, beans and cassava for one or two agricultural seasons, and finally seek another plot deeper in the forest (starting the cycle again); in the meantime, the fallow land turns into pasture which allows the first settlers to 'sell' the plot to generally better endowed ranchers who settle with their cattle. This situation coincided with the launching of the agrarian reform in the municipality of Iriona<sup>49</sup>, which allowed some of the ranchers in particular to benefit from land reform titles. It was in the context of this second wave of agricultural expansion that the community of Copén was formed.

In 1992, with the proclamation of the Law for the Modernization and Development of the Agricultural Sector (see *below*), and by means of the implementation of the Social Forestry System, the State engaged itself in the process of to devolving some rights over the forestland (which remained under a national property rights regime) to the community people of Copén, in order to foster a legal exploitation of the forest resources. The implementation of the law required the development of a forest management plan that needed to be approved by the State agency in charge of forest management, at that time named AFE-COHDEFOR, for "*any tree felling or commercial forest exploitation*". The law established the legal responsibility of AFE-COHDEFOR for the elaboration and execution of the management plan, as Copén is located in an area under national property rights regime. However, AFE-COHDEFOR didn't have the sufficient economic or human resources necessary for this. The same applied for the community people, which is understandable considering the complex requirements for establishing such a Plan. This resulted in a situation in which Copén, as many other communities in the same situation, couldn't develop the required Plan without the support of an external actor.

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<sup>49</sup> In 1996 immigration into the municipality increased, above all due to families interested in benefiting from the process of agrarian reform. Thirty-two associated campesino companies were formed.

In 1996, an Italian NGO called COSPE (Cooperation for the Development of Emerging Countries) launched a development project in Copén, benefiting from European Union funds. This project aimed at promoting sustainable management of NR in various communities of the Atlantic region of Honduras, through organizing networks for inter-community collaboration for the transformation of timber into value-added products for both the national and international markets. To that end, the Project emphasized a model of community forest management: without any doubt, it was decisive in the local development of Copén and it participated in the reshaping of local NR governance in the community.

In the framework of the Project, a CBO was created under the name of '*Sociedad Colectiva Romero Barahona y Asociados*' (SCRBA). SCRBA, after a few years, obtained a legal status that made it possible to engage in the process of obtaining from AFE-COHDEFOR a forest exploitation permit on national forestland<sup>50</sup>. As soon as the permit was delivered, and with the support of COSPE staff, the community people of Copén launched the elaboration of a Forest Management Plan. First, people had to agree to identify and delimit through consensus with other neighboring communities<sup>51</sup>, a portion of land over which the Plan would regulate the access and the exploitation modalities. During the delimitation process, the community people agreed to keep a small watershed (1,132Ha) as a permanent conservation area with the objective of establishing a catchment for drinking water<sup>52</sup>.

The SCRBA began its activities along with twelve members organized in a board<sup>53</sup>. The participation of women in the SCRBA, as members of the CBO, started after several male members put their representation in the hands of their spouses or other family members. In the beginning, even though the members of the SCRBA were organized, people preferred to work in the forest individually, each one with their own equipment. Timber was also sold individually and the gains obtained didn't make any contribution to collective interests. The usage rights for timber extraction were equally divided among the members, entrusting each one to make benefit from timber however they saw fit. When a member could not meet the costs related to timber extraction, he would transfer his usage rights to other members, and was employed as a waged-laborer for the member who had acquired his rights. This exchange of usage rights was definitely considered a weakness of the CBO that resulted in it being an organization without any collective engagement from the cooperative members, nor any benefit for the community.

However, from a forest exploitation point of view, the establishment of a Forest Management Plan allowed SCRBA to enter into the SmartWood Program (see Box 4) in 1997, which meets the certification policy of the Forest Stewardship Council (FSC).

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<sup>50</sup> The legal base of the agreement is Article 24 of the Law for the Creation of AFE-COHDEFOR (currently ICF) and Articles 73 and 76 of the Law for the Modernization and Development of the Agricultural Sector.

<sup>51</sup> However, during that period many conflicts occurred, in particular with a neighbouring community which claimed part of the forest area that falls under the usage permit of Copén.

<sup>52</sup> Recently, and together with the support of the State, the community people built a system for the catchment of water, which was established in this watershed for distribution of drinking water in the community. In addition, alongside the development of the drinking water system, the distribution of water allowed the creation of family vegetable gardens in the community.

<sup>53</sup> Composed of six people, a sales manager, a monitoring committee and a transport committee

#### Box 4 – the SmartWood Program

The Rainforest Alliance’s SmartWood program (from here onwards “SmartWood”) has developed a Generic Standard for the Verification of Legal Origin (VLO) which is used to verify the legality of timber originating from tropical forests.

SmartWood developed an auditing Program for legality verification, the key points of which are: (i) it is voluntary in nature; (ii) it borrows from the experience of FSC chain-of-custody auditing; (iii) it verifies timber tracking from all forest sources and all points within a defined scope; (iv) Chain of custody is required for any entity and audited at the forest; contractors; sawmills; manufacturers, including a framework of principles, criteria, and indicators for legality; (v) There are two generic standards concerned with origin and legal right to harvest (currently in draft, for consultation); (vi) it will incorporate ‘legality definitions or standards’ as defined per Honduran Laws; and (vii) it will be adapted for each country. In accordance with SmartWood, timber exporters would need to demonstrate verified legal origin (VLO), i.e. authorization to harvest from the resource rights holders, that planning approvals are in place and that there is a valid permit or license. Harvesting must be in compliance with all national and sub-national laws governing the management and harvesting of forest resources (verified legal compliance – VLC). SmartWood sees this as a stepwise approach, addressing legality and sustainability, on the road to full FSC certification.

Source: [www.rainforest-alliance.org](http://www.rainforest-alliance.org)

Upon completion in 1999, the COSPE-UE’s Project shaped the basis of the reorganization of support to SCRBA, and got a US organization onboard: GreenWood (see *below*) initiated a series of training and capacity building workshops for the members of SCRBA<sup>54</sup>. After some years, GreenWood supported the establishment of an intermediary, the GreenWood Foundation (FMV, see *below*), as a strategic technical and administrative ‘partner’ for SCRBA. However, the transition proved to be difficult and SCRBA experienced various problems, among which internal conflicts and mismanagement of funds, all of which led to the suspension of the FSC certification. Thanks to GreenWood though, SCRBA managed to move beyond these problems. Green Wood also made it possible to improve infrastructure, equipment, and the administration system of SCRBA, which allowed it to once again fulfill the requirements of FSC certification. In 2002, GreenWood set up a WoodMizer sawmill, in coordination with the Honduran NGO named MOPAWI (*‘Moskito pawisa’* which means the Development of Moskitia in the Miskitu language), which created opportunities for new markets: in 2004, the SCRBA-GreenWood-FMV ‘partnership’ signed a contract with a US importer of high quality guitar parts that shortly became the most important exported forest product from Copén<sup>55</sup>.

During the same period, in 2002, AFE-COHDEFOR reorganized its administration, passing jurisdiction over the area in which Copén depends, from the Atlantic Region to the Biosphere Reserve of Rio Platano. This facilitated procedures for SCRBA members who could process all their administrative needs from the office of Champas, Sico or Palacios. In parallel, AFE-COHDEFOR decided to authorize usage permits in the Pauyala River Valley for making profit from dead wood, i.e. wood derived from trees that had fallen due to natural causes (Hurricane Mitch struck Central America in 1998, devastating many forests). From a legal and juridical point of view, this timber exploitation was not illegal or founded on the delivery of AFE-COHDEFOR permits. However, evidence suggested that over 80% of the extracted

<sup>54</sup> Such as the production of parts for the restoration of the sailboat “Friendship” in the Mystic Seaport Museum of Connecticut, the production of samples of guitar parts for the Taylor Guitar Company of California, and the installation of a portable Wood Mizer in coordination with WWF and MOPAWI

<sup>55</sup> With technical and administrative guidance from GreenWood/FMV, the cooperative established an exportation contract with the US company, Taylor Guitars, which until today is still the main destination for mahogany extracted by the cooperative. It was GreenWood, in the name of the cooperative, which negotiated prices and specifications with Taylor Guitars, and organized the drying of wood, its transport, and the exportation documentation. GreenWood also helped to obtain loans in order to buy sawing equipment at discounted prices and bring in donations to support and strengthen operations.



timber at that time was illegal and that AFE-COHDEFOR permits were just a masquerade to legalize illegal logging (del Gatto 2006). It was in this moment that SCRBA decided to restructure its board and that FMV proposed to SCRBA to group with the Union of Cooperatives UNCAF-BP (see *infra*) in order to benefit from a collective Chain of Custody process and guarantee the origin of the timber. As a base for the process, the guidelines provided by a foreign NGO called Mundo Justo were used. In this context, and officially due to the high costs of complying with FSC requirements at an individual level, SCRBA suspended its individual FSC certification and integrated the group certification.

In 2008, SCRBA was reorganized into a cooperative named 'Las Brisas de Copén'. The cooperative, still following the technical and administrative guidance from GreenWood/FMV, began to benefit from other projects and funding sources (such as the US Forest Service). In particular, the cooperative integrated the project "Promoting Integrated Management of Ecosystems and Natural Resources in Honduras" (Acronym: ECOSISTEMAS), executed by the ICF (in the meantime AFE-COHDEFOR had changed its name into ICF) with funds from the Global Environment Fund. It was also supported by the World Bank during the implementation of its GEF project called the "Corazón Transfrontier Biosphere Reserve Project" which aimed at supporting a proposed new UNESCO transboundary reserve between Nicaragua and Honduras, constituting the "heart" of the MBC, and which involved SERNA, the Municipality of Iriona, FMV, and the Honduran Foundation of Agricultural Research (FHIA). Within the framework for the implementation of these projects, a Chain of Custody system was established, which impacted on the forest management practices of the cooperative.

### *Social and economic characteristics of the community*

The main activity in Copén is cattle-raising (according to the fieldwork, 80% of families own cattle), followed by agriculture (80% have access to a plot of land to cultivate). However, according to fieldwork, agriculture, is mostly dedicated to self-consumption as only 10% of families in Copén manage to generate surplus from their production, which they sell locally in the community. However, in accordance with fieldwork, most of the families in Copén do not even manage to cover their basic needs with their own production, which would only cover their needs during 5 months of the year. To get complement their income, community people practice small-scale mining and sell gold, which can be found in the site's river and streams. Some of the community people are also engaged in forestry activities and sell timber, especially mahogany (see *below*); occasionally they work as day laborers (only 5% work as day laborers outside of the community).

In general terms, the difficulty of transporting products, either agricultural or forest products, and especially timber, means that most of the products are for domestic use (food, construction of houses and furniture, or firewood for cooking). Only mahogany, which is extracted by the cooperative members, has a high enough value to cover the costs of transportation out of the community forest. According to the fieldwork, it is not considered that anybody in the community depends to a large extent on the forest for their own subsistence; neither do they consider that anybody depends, to a large extent, on commercial forestry activities.

According to the fieldwork, there is a high level of inequality between the families of Copén (10% of the families are considered to be rich, 10% are considered to be poor). Community people define wealth or economic wellbeing as based on possession of a house, large amount of land, and access to basic services within their home. Additionally, possession of cattle in particular is seen as a standard of wealth.

Of Copén's inhabitants, 100% are *mestizo* and of recent origin in the region (from the 1970s onwards). 80% of the community members are Catholic and 20% evangelist.

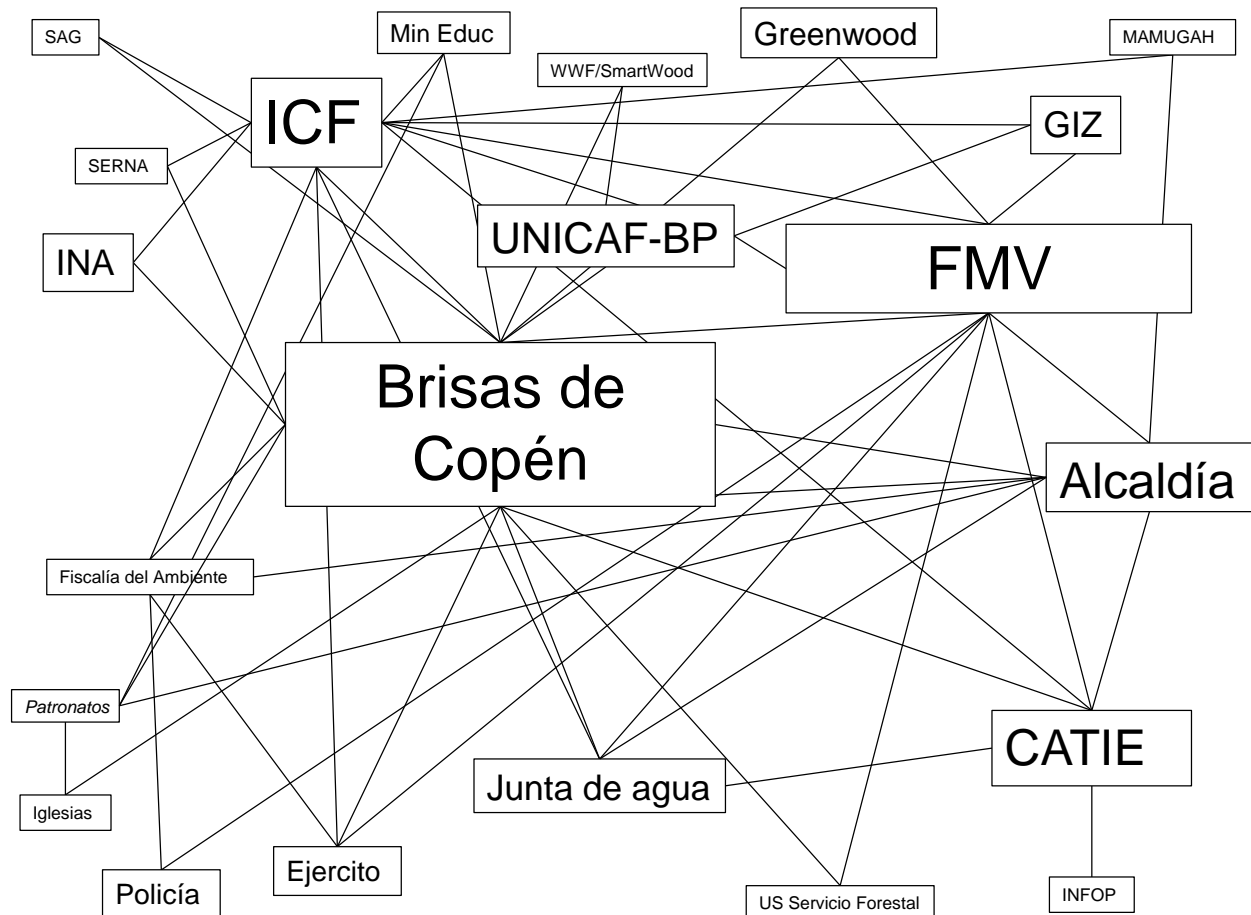
### Administration and local governance structures

As in other rural communities in Honduras, the population in Copén is organized into a board of local leaders named “*Patronatos*” for administrative purposes. These leaders are in particular engaged in the management of funds and projects, in collaboration with the municipality. The law on *Patronato* and community associations, recently approved (2013), establishes the legal recognition of *Patronatos* and their autonomy in decision-making.

### Key stakeholders engaged in local NR governance

Many stakeholders play a key role in local NR Governance in Copén (see Figure 36). However, as illustrated, not all of them are important, and it is not because they are important, that they are influential in decision making.

Figure 36 – Map of important actors in local NR governance in the site



Source: adapted IFRI protocol

### The Cooperative ‘Brisas de Copén’ (formerly SCRBA)

The cooperative is a CBO that theoretically plays a central role in the management of NR in Copén, in particular in timber exploitation. As previously mentioned, it was created with the objective of organizing the community people in order to access a usufruct permit to exploit national forest. Currently the cooperative is composed of 23 members,

of which 5 are women<sup>56</sup>, with 3 of these 5 women occupying leadership positions (president, secretary of the supervisory board, and secretary of the board of directors). The members are representatives of the community members of middle and low incomes. All cooperative members are from and live in Copén. They all belong at the same time to both the cooperative and the local water board. Their organizational structure is composed of a general assembly, which is the highest authority, a board of directors and a supervisory board, which are elected by the general assembly. The cooperative also has different technical committees.

The leadership of the cooperative (the two boards) changes every 2-3 years. The cooperative organizes meetings for its members once every 3-6 months, in which about 80% of the members participate. Registers are maintained and available for all members and, additionally, financial registers are maintained which are presented once a year.

The cooperative is not an entity that functions autonomously. As it is integrated into the Union of Agroforestry Cooperatives of the Biosphere Reserve of Rio Plátano (UNICAF-BP) (see *below*), which guarantees collective FSC certification and supports the search for market outputs, the cooperative is only allowed to commercialize certified timber through UNICAF-BP. In addition, the cooperative does not have autonomy in financial management, which is mostly directed by FMV (see *below*).

#### Box 5 – The management of gains generated by the sales of timber in the site

In accordance with the Cooperatives Law (Articles 106 to 109), the cooperative shall establish three funds which are fed by timber sales. The percentage of timber sales allocated to each of these funds is defined by the general assembly of the cooperative after the completion of timber sales. The three funds, which are mandatory by Law, are the following: (1) a contributions fund, which aims at contributing to retirement pensions for the ex-members of the cooperative, (2) a reinvestment fund, which is used to carry out forest activities (e.g. tree inventory), and (3) a social fund, which aims at developing community projects.

Aside from these three funds, 5 others have been created: (4) a certification fund, which aims at covering the activities related to the supervision of audits and related certification activities; (5) a Forest Management Fund, which aims at carrying out activities related to the Forest Management Plan; (6) a Reinvestment fund, which aims at purchasing equipment; (7) a fund which should be equally redistributed among all of the members and used at their own convenience<sup>57</sup>, and (8) a fund for the strengthening of the cooperative, in particular for training and capacity building of the members. The management of these funds takes place under the co-administration of the Cooperative and FMV.

Source: UNDP, 2013: <http://www.hn.undp.org/content/dam/honduras/docs/publicaciones/Economia%20verde-rural-agosto%202013-version%20facil.pdf>

<sup>56</sup> The social norms in Copén continue to restrict the participation of women in decision making: for example, a woman cannot hold a management position without the approval of her husband.

<sup>57</sup> In 2006 and 2009, this fund was used to buy school supplies for the children of the cooperative members; in 2009 it was used to purchase solar panels and lamps for members' houses.

## The Union of Agroforestry Cooperatives of the Biosphere Reserve of the Río Plátano (Spanish acronym: UNICAF-BP)

The UNICAF-BP groups seven agroforestry cooperatives located in the Valley of the Sico and Paulaya Rivers (of which one is the Cooperative 'Brisas de Copén'). The Union was created with the idea of facilitating timber commercialization, and received financial support from various external actors, among which the International Cooperation Agency of Germany (GIZ) –which plays a key role in the governance of the Union–, and RainForest Alliance/SmartWood, that plays a key role in the governance of the cooperatives. As an affiliate of UNICAF-BP, the cooperative 'Brisas de Copén' had to sign an exclusivity clause which obliges the cooperative to carry out all exports through UNICAF-BP, requesting permits each year.

## GreenWood and the Foundation 'Madera Verde'

GreenWood is a US NGO that was founded in 1991, and which operates in various countries around the world, with the objective of strengthening local capacities and market access for 'sustainable' timber products. In 1993, GreenWood began operations in Honduras, in the form of a project from the Woodworkers Alliance for Rainforest Protection (WARP) and the Good Wood Alliance. In 2004, GreenWood formed a local Foundation named '*Madera Verde*' (Spanish acronym: FMV), as a legally-recognized non-profit body in Honduras for its operation in that country (FMV obtained legal status from the Ministry of Government and Justice by means of resolution No.411-2004). In Alliance with the US Branch, FMV worked as a local organization on various forestry projects in Honduras, providing technical and administrative assistance, strengthening local capacities in forest management in various rural communities, and facilitating access to markets for forest cooperatives. FMV is governed by a local board of directors and is run by local staff. FMV works directly with three cooperatives in the buffer zone of the Biosphere Reserve of Río Plátano, and in particular with the cooperative 'Brisas de Copén'.

GreenWood and its Honduran branch FMV have played a crucial role in local NR governance in Copén. The cooperative has a collaboration agreement with FMV, which establishes the relations between the two and the conditions of the technical and administrative assistance provided by FMV, with GreenWood being the guarantor of this agreement. As a consequence, GreenWood/FMV have controlled almost every activity of timber extraction and of financial and administrative management related to timber extraction and export from the community; even for negotiating exportation contracts (which at least are signed by both the cooperative and GreenWood/FMV), GreenWood plays a crucial role as it is the guarantor of the contracts. If the cooperative is definitely an important stakeholder in local NR governance, the truth is that it is not so influential in decision making regarding NR. During the fieldwork, the members from the cooperative affirmed that all decisions are taken in accordance with the local people. However, what is their real power of negotiation with GreenWood/FMV? In addition, the members of the cooperative *"do not consider themselves sufficiently prepared for the administration of funds of the cooperative, due to previous negative experiences"* [they refer in particular to the situation after the completion of the COPSE-UE Project]. But after 10 years of 'partnership' with GreenWood/FMV, is it really still the case?

## The Institute of Forest Conservation, Protected Areas and Wildlife

The ICF has a delegation in Sico. Legally, ICF is responsible for the monitoring of and for providing technical support to the cooperative 'Brisas de Copén', as the community forestland is under national tenure regime and the members benefit from a usage permit granted by ICF. However, as previously mentioned, it appears that ICF is "delegating" its responsibilities to other external stakeholders, as was the case with COSPE for the elaboration of the Forest Management Plan, and since the beginning of the 2000s, to GreenWood/FMV.

In addition, ICF is also responsible for the protection and conservation of protected areas in the Municipality of Iriona: the Biosphere Reserve of Río Plátano and the Sierra del Río Tinto Forest Reserve. However, although ICF is influential in policy making and has clear mandates and responsibilities in the policy and legal framework, its on-site activities are very limited. Since 2010, more than 500Ha have been deforested in the area under the Forest Management Plan: this has been reported by the cooperative to the ICF and to the General Attorney's Office for the Environment. Inspections have been carried out by the ICF, and the procedure has been taken to the General Attorney's Office for the Environment, but nothing has been done and invasions and illegal logging are still ongoing.

### The National Agrarian Institute

The INA has a presence in the region by means of a local office in Sico. Although its current mandates and responsibilities have been greatly reduced, the INA has played an important role in the past, in particular when granting some community members of land reform titles.

### The 'Patronatos' and the community water board

Although by Law, the '*Patronatos*' are composed of leaders of the community and their legal representatives in all administrative issues of the community, their activities are limited, and concentrated in the execution of infrastructural works such as reparation of roads or buildings. Consequently, they are not very influential or important in local NR governance. However, it is worth mentioning that they recently played a role in supporting the creation of a community water board, mostly formed by members of the cooperative, during the establishment of a drinking water system from the forest to the community and of a micro-hydroelectric plant that supplies electricity to the community. The water board is in charge of collection of fees and of the maintenance and reparation of the drinking water system and hydroelectric power system, with the support of protection brigades, in which all community members participate. For both the drinking water system and the hydroelectric system, the water board charges users a tariff. This fund is administrated by the board and used for the maintenance and reparation of both systems.

### The Municipal Government of Iriona and its Environment Unit

The Municipal Government of Iriona, through its Environment Unit (Spanish acronym: UMA), has the mandate of protecting and regulating use of NR within the jurisdiction of the Municipality. However, its main contribution consists of registering sites for gold extraction. In addition municipal officers have very little interaction with community members. Consequently, its role in the NR local governance is also very limited.

### The Police, the Army and the General Attorney's Office for the Environmental

The police and the Army are responsible for safeguarding security and order in Honduras. Both have detachments in Iriona. Within their mandates, they control the transportation of timber, as well as supporting the General Attorney's Office for the Environment in the execution of arrest warrants and court rulings. The Army has carried out patrols together with members of the cooperative 'Brisas de Copén', mainly in the case of invasions in the forestland under the Management Plan. In 2013, they maintained the permanent presence of a detachment in the community for a period of 6 months, aiming to reduce deforestation.

The General Attorney's Office for the Environment has its main office in Trujillo, the departmental capital of Colón. Although it is responsible for imparting justice and applying the law in cases of reported illegal timber trafficking, illegal logging, forestland invasions, or any other environmental offenses and crimes, the Office lacks presence in Copén, which limits the actions that it is able to undertake.

#### Box 6 – “Narco-deforestation”: a major threat for remote forests in Honduras like Copén

According to a new report which has been published in the journal *Science*, drug smuggling is rapidly increasing rates of deforestation in Honduras. This report states that remote forests in Honduras are being cut down to facilitate landing strips for the transportation of narcotics and that the importance of the area as a route for trafficking has increased significantly over the past seven years after a crackdown on the narcotics trade in Mexico, which prompted drug traders to move their operations into more remote areas in countries like Honduras and Nicaragua, which confirmed by fieldwork in Copén. The report also states that the influx of drug cash encourages ranchers, timber traffickers and oil palm growers to expand their activities. The drug dealers themselves often see advantages in converting the forests into agricultural land. Buying and clearing the forests helps launder profits, and the traffickers usually have enough political influence to ensure their titles to the land are not contested. Through this process, the “improved” land can then be sold on to corporate concerns. In this way, what was once forest is permanently lost to agriculture.

*Source: McSweeney et al. (2014)*

### The Platform for Environment and Production dialogue of Sico-Pauyala

The Platform for Environment and Production dialogue of Sico-Pauyala was created in order to facilitate dialogue, cooperation, and coordination between local and external stakeholders in the management and use of NR and in production in the Valley of the Paulaya and Sico Rivers. It is organized around a board of directors which is formed by some local officials (UMA of Iriona), representatives of the local civil society, and external actors (among which FMV and other projects such as ECOSISTEMAS). Currently, the Platform is promoted and supported by the ECOSISTEMAS Project and other external actors such as FMV, the POPOL TUN NAH Foundation, CISP-Italy, GIZ, and state agencies such as INA and ICF. However, its contribution to local NR governance is limited, although it does manage funds intended for the implementation of direct action.

#### *Local practices and regulation of access, use and exploitation of NR*

### Agricultural land and pastures

Agricultural cultivated land and pastures cover approximately 40% of the surface in Copén according to the fieldwork. The results also show that about 80% of community people have access to a plot of land, the size of which varies from 20 to 300Ha, where people either breed domestic animals (a herd composed of from 2 to 20 heads of cattle, some mules and horses used for traction and transportation), or, just as more broadly in the Valley of the Sico and Paulaya Rivers, cultivate staple foods for self-consumption (corn, rice, cassava, and beans). Community people also have a few chickens for self-consumption, and raise pigs to sell.

In legal terms, the site falls under the category of national property rights tenure regime, but perhaps the most notable characteristic in terms of access to land, is that *de facto* occupation, without any legal document, is the main way for community people to access a plot and to use NR (except in forestland where a usufruct agreement was granted from the ICF, and where some people were entitled of an agrarian reform document<sup>58</sup>). The legality of rights over the land is a very sensitive issue in Honduras in general, and in the site in particular.

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<sup>58</sup> However, it wasn't possible to establish the amount of these titles arising from agrarian reform in the community, as the community members which mentioned having ownership rights, don't have the corresponding documents.

Generally, to access to a plot, people burn and clear a piece of forestland and simply declare themselves as “owners” of that plot, a situation accepted by their neighbors as they did exactly the same thing to access “their” plots, following the informal norm, which states: “*if you respect my possession, I will respect yours*”. As community people generally accept that norm, or rather the occupation of their fellow members, land access doesn’t give rise to much conflict within the community members. This form of “appropriation” or rather of occupation of land, has historically been practiced in the site, as it was the main driver of the advance of the agricultural frontier in the region. In some cases, families accessed land by buying “usage rights to others” or justified their “possession” by saying that they bought a piece of land from a previous “owner”, but the reality is often that no previous “owner” exists, nor does any document safeguard the rights over the land, even if currently, the State recognizes the necessity of implementing a program for the registration and delimitation of land plots, with the aim of legalizing rights.

Nevertheless, conflicts do exist over the land in Copén and over the corresponding NR. As previously mentioned, the delimitation of what would be the “jurisdiction” of the community with its neighbors has been conflictive, especially during the elaboration of a Forest Management Plan; and in the forestland, including where the Management Plan applies, invasions, which are accompanied by deforestation based on the same slash and burn method, have never stopped, as outsiders probably consider that they have the same “rights” to occupy, which are not more illegal or legitimate than the “rights” of the community people.

### *The forest and its resources*

In accordance with Honduran laws, access to forests and use/exploitation of forest resources shall be regulated, and in the case of national forests, by the ICF. The mechanism defined in the above laws is the signing of an usufruct contract or agreement with a CBO (in this case, the cooperative) that allows the cooperative to exploit the forest and to use non-forest products derived from the forest, the owner of the forestland remaining the State. Therefore, community people can neither sell forestland nor use it as a guarantee to access credit.

As the community of Copén has complied with all of the requisites of the law, including the elaboration of a Forest Management Plan and yearly operational plans, the cooperative has been exploiting forestland since 1998. In order to guarantee the legality of the timber, a chain of custody mechanism for the commercial exploitation of the forest (mostly mahogany) is implemented.

#### **Box 7 – Copén’s community management plan**

The Forest Management Plan is an instrument which is mandatory in the Forest, Protected Areas and Wildlife Law. It shall cover all the activities to be undertaken in the forest, above all the extraction of timber. It establishes the quantity of wood to be extracted for each species. It also defines the routes and the mitigation measures that should be taken in order to minimize the impact of extraction activities. Areas of protection and conservation are defined in the plan, as well as the activities to be developed in relation to protection. Each management plan includes the preparation of an Annual Operating Plan, in which the year’s activities are defined, and the quantities and species to be used.

Following the Management Plan, the community has access to an area of forest equivalent to 4,149Ha composed of 3,991Ha of primary forest and 158Ha of secondary forest. The 3,991Ha of primary forest is divided into 1,837Ha of productive forest under the Management Plan, 1,022Ha of protected forest, and 1,132 for the protection of the waters, in accordance with the established Management Plan.

The forest used by members of the Copén community also allows them to satisfy some of their needs: timber to construct housing (the fieldwork indicates that 70% of the needs of the community are satisfied, as most houses are



constructed from wood combined with bricks and cement), firewood<sup>59</sup> (20% of the needs are satisfied from the collection in the forest area, the rest being obtained from the trees on their plots), and food (3% of the needs come from the forest, like wild fruits). In addition, the forest provides medicinal plants. Forestry activity represents the fourth greatest source of income for community people, only surpassing remittances, the first income sources being cattle-raising, permanent salaried labor, and agriculture production. This indicates that while forestry activity is important for the community, it has a low impact on the families' economic situation as a whole.

### *Water*

Copén has access to the Paulaya River, as well as several streams. The River and its water sources have their recharge watershed in the forest. Water is mostly used for domestic consumption. As mentioned, water is also used to generate hydroelectric power.

### *Minerals and other resources*

Panning for gold in the Paulaya River is an important economic activity in Copén. This is done by sifting the earth in order to obtain the nuggets of gold. No chemicals are used in the process to separate the gold, therefore the main environmental impact is the deposition of sediment in the River. The small-scale extraction of gold is an activity for which official extraction permits do not exist. The UMA within the Municipality of Iriona has begun to register individuals who undertake this activity, mostly for tax purposes.

### *Final considerations*

In Copén, NR governance could be summarized as the interactions between three key stakeholders: a CBO, the cooperative 'Brisas de Copén', which is the centerpiece to legally access forest, the Honduran state (through ICF which manages the usufruct agreement that regulates forest exploitation, and in a much weaker way, through INA which enabled some community members to access land reform titles), and GreenWood/FMV.

Even though in terms of forest extraction, the results are successful from many points of view (increase in extraction of legally and certified timber, particularly mahogany processed into guitar parts, directly exported to a US company), it is necessary to question the governance situation. The dependence of the cooperative, even after so many years, on technical and administrative assistance from GreenWood/FMV is still notable, while it would be expected that the cooperative would have become more autonomous at least, in the administration of the funds generated by timber exports. GreenWood/FMV has effectively established processes which strengthen the cooperative (both from technical and market access points of view), but the fact that the cooperative won't manage decisions (e.g. they won't sign any contracts for the sale of timber on their own, assuming the full responsibilities) makes it seem like a simple provider of primary materials for higher value markets (the cooperative members do sign, on their own, timber sales for the domestic market), while they are actually the rights holders over the forest (albeit partial rights). Little by little, the situation seems to be changing, but there remain issues and challenges.

In general, the community people believe that forest management performed by the cooperative, in association with GreenWood/FMV, has been positive, particularly because a share of the benefits of the export of certified timber, thanks to a social fund, has been reinvested in community projects (such as school reparations, etc.) or has attracted other projects with social interest for the benefit of the many (such as the micro-hydroelectric plant that supplies

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<sup>59</sup> In the case of firewood, the rule in use is that rights of usage are given to the occupant of the land in which it is collected. It is generally from the agricultural plots and pastures that most of the families collect firewood. The ICF has no control over firewood, as it is not sold but collected for a family's own use. No specific community norm exists regarding this resource.

electricity to the community), which has effectively permitted the improvement of living conditions. However, it should also be recognized that only a few community members participate in the activities of the cooperative (only 23 members of the 42 dwellings of the site), and particularly, that the participation of young people is limited. However, one should also recall that forestry in general, is not the main source of activity and income in the site, where people are essentially cattle-ranchers and subsistence farmers.

Something which is indeed considered as a problem in the site continues to be unsecure land tenure, especially in the forestland, where the historical process of the advance of the agricultural frontier has not been halted by the implementation of the forest management plan. The failure to apply sanctions, the low institutional presence and the low capacity of state agencies to exercise the controls defined by law encourage the invasion of the forest and illegal logging.

## CONCLUDING REMARKS

One of the core objectives of the present research Project was to develop an operational method to map institutions relating to access, uses and exploitation of NR in the N-H SL, to understand the institutional settings and the state of governance of NR in the SL and document how institutions of concern operate, in order to illustrate trends in the complexity, issues, and challenges of their functioning.

The results of the Project, while meeting with this general objective, allow drawing some lessons from the challenges faced while applying the method. In particular, one should emphasize on the following ones: 1) the need to adopt a landscape approach i.e. to upscale and scale out the results at the landscape level, in particular in order to establish indicators of institutional change; 2) the need to in-depth analyze institutions and social practices of NR users and stakeholders, which are often and only very locally 'understandable', which are multidimensional, multilevel, and in constant evolution; 3) the fact that the landscape was (mostly) defined from a land-uses' approach, i.e. based on bio-ecological criteria allowing the landscape to be representative of all the states of the 'forest curve transition' and NOT from a geographic perspective, meaning that the SL is not a research object which is spatially, historically, politically and socially meaningful.

The first lesson learnt from the Project is that to be able to correctly analyze institutional settings in a Landscape, it is needed to zone the Landscape in accordance to the formal political and legal system of each country involved in the SL. In the case of the N-H SL, institutional settings are relying on two different political and legal systems, with two different sets of state organizations in charge of their development, implementation and application. In addition, the Project identified more than 30 formal laws and regulations relating to NRM in the Landscape and about 15-20 state organizations with legal mandates and responsibilities in NRM, in a context of great heterogeneity of governance within each country. Moreover, results also showed that mapping 'legitimate' property rights is challenging, in particular due to various constraints (absence of Cadaster; generalization of illegal land tenure; unclearness of limits of concessions, which are in addition subject to serious conflicts, including with the State, etc.). Finally, they showed that assessing NR governance from the stakeholders' perspective, and in particular scoring perceptions, is not an easy task and it cannot provide information on effective behaviors at the community and individual level, neither enable linking an assessment of NR governance 'quality' with ecosystem health.

The second lesson learnt from the Project is, consequently, that an in-depth analysis of socio-political processes and local institutions is determinant to map institutions relating to access, uses and exploitation of NR. However, to avoid unrealistic and unmanageable fieldwork, it is needed to select interesting, relevant, and illustrative cases to document, which can be based on several criteria (such as the types of rights over NR, forms of uses of NR, presence of conflicts, etc.). This stage of selecting cases studies, which can only be done based on local expertise and knowledge about the socio-cultural and political situation of local sites, is the only way to enable a correct understanding of institutions, rights over NR and governance systems, which are highly complex. However, one should also recognize that many crucial issues linked to institutions relating to access, uses and exploitation of NR are highly difficult to assess (such as corruption, drug trafficking, or all other political sensitive topics, etc.) and consequently hardly 'mappable'. Finally, one should also recognize that what locally govern NR mostly refer to individual agencies, including those of external actors, and that consequently, it is rather complicated to upscale and scale out results at the Landscape level.

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## ANNEXES – DATA COLLECTION INSTRUMENTS

### NATURAL RESOURCES GOVERNANCE QUESTIONNAIRE

1. Name of the organization of the informant:

2. Age of the informant:

a) 20 or less

b) 21-40

c) 41-60

d) 61+

3. Gender of the informant

a) Male

b) Female

4. What is your current position?

Include a brief description of mandates and responsibilities of the informant, as well as his/her activities and geographical area of intervention

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5. Since when do you occupy this position?

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6. From your standpoint: What natural resources (NR) are important? Why?

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7. From your knowledge and experience: Do the country has any laws and regulations at the national level that are directly related to NR management (NRM)?

a) No

b) Yes

Please, name the national laws and regulations that you know and work with

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8. From your knowledge and experience: Do the country has any laws and regulations at the sub-national level that are directly related to NRM (municipal, regional/ territorial/ communal/ protected area)?

a) No

b) Yes

Please, name the laws and regulations at the sub-national levels that you know and work with

9. Could you please name what are the organizations and stakeholders that you think are important and/or influent in NRM in your country?

[illegible]

10. How much do you agree with the following statement: laws and regulations for NRM are easy to understand to the majority of people?

a) I strongly disagree. They are always difficult to understand	b) I disagree. Some of them are difficult to understand	c) I don't have opinion	d) I agree. Most of them are easy to understand	e) I strongly agree. All of them are always easy to understand
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11. How much do you agree with the following statement: laws and regulations for NRM are consistent one with another, i.e. they never enter in conflict?

a) I strongly disagree. They always enter in conflict	b) I disagree. They often enter in conflict	c) I don't have opinion	d) I agree. Most of them are consistent	e) I strongly agree. All of them are always consistent
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12. How much do you agree with the following statement: laws and regulations for NRM between the national and the sub-national (regional / municipal / territorial / Reserve) are consistent one with another, i.e. they never enter in conflict?

a) I strongly disagree. They always enter in conflict	b) I disagree. They often enter in conflict	c) I don't have opinion	d) I agree. Most of them are consistent	e) I strongly agree. All of them are always consistent
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13. How much do you agree with the following statement: laws and regulations for NRM are easy to implement/ to apply?

a) I strongly disagree. They are always difficult to implement	b) I disagree. Some of them are difficult to implement	c) I don't have opinion	d) I agree. Most of them are easy to implement	e) I strongly agree. All of them are always easy to implement
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14. How much do you agree with the following statement: laws and regulations for NRM are implemented/ applied correctly?

a) I strongly disagree. They are never implemented nor applied	b) I disagree. Some of them are not implemented/ applied correctly	c) I don't have opinion	d) I agree. Most of them are implemented / applied correctly	e) I strongly agree. All of them are always implemented / applied correctly
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15. How much do you agree with the following statement: laws and regulations for NRM are respected?

a) I strongly disagree. They are never respected	b) I disagree. Some of them are not respected	c) I don't have opinion	d) I agree. Most of them are respected	e) I strongly agree. All of them are always respected
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16. How much do you agree with the following statement: procedures related to laws and regulations for NRM are complex, i.e. there is a lot of bureaucracy?

a) I strongly disagree. They are easy and there is no bureaucracy	b) I disagree. Some of them are complex and there can be some bureaucracy	c) I don't have opinion	d) I agree. Most of them are complex and there is often bureaucracy	e) I strongly agree. All of them are always complex and bureaucracy is a critical issue
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17. How much do you agree with the following statement: laws and regulations for NRM legally recognize property rights over land?

a) I strongly disagree. They do not legally recognize property rights over land	b) I disagree. They barely legally recognize property rights over land	c) I don't have opinion	d) I agree. They often legally recognize property rights over land	e) I strongly agree. They always legally recognize property rights over land
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18. How much do you agree with the following statement: laws and regulations for NRM legally recognize property rights over other natural resources (like trees, plants, wild animals, fruits, water, underground resources like mineral, etc.)?

a) I strongly disagree. They do not legally recognize property rights over other NR	b) I disagree. They barely legally recognize property rights over other NR	c) I don't have opinion	d) I agree. They often legally recognize property rights over other NR	e) I strongly agree. They always legally recognize property rights over other NR
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19. How much do you agree with the following statement: laws and regulations for NRM effectively protect property rights over land?

a) I strongly disagree. They do not protect effectively property rights over land	b) I disagree. They barely protect effectively property rights over land	c) I don't have opinion	d) I agree. They often protect effectively property rights over land	e) I strongly agree. They always protect effectively property rights over land
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20. How much do you agree with the following statement: laws and regulations for NRM effectively protect property rights over other natural resources?

a) I strongly disagree. They do not protect effectively property rights over other NR	b) I disagree. They barely protect effectively property rights over other NR	c) I don't have opinion	d) I agree. They often protect effectively property rights over other NR	e) I strongly agree. They always protect effectively property rights over other NR
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21. How much do you agree with the following statement: laws and regulations for NRM legally recognize customary rights of indigenous people over natural resources?

a) I strongly disagree. They do not protect effectively customary rights over NR	b) I disagree. They barely protect effectively customary rights over NR	c) I don't have opinion	d) I agree. They often protect effectively customary rights over NR	e) I strongly agree. They always protect effectively customary rights over NR
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22. How much do you agree with the following statement: laws and regulations for NRM effectively protect customary rights of indigenous people over natural resources?

a) I strongly disagree. They do not protect effectively customary rights over NR	b) I disagree. They barely protect effectively customary rights over NR	c) I don't have opinion	d) I agree. They often protect effectively customary rights over NR	e) I strongly agree. They always protect effectively customary rights over NR
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23. From your standpoint, how much do you agree with the following statement: customary rights of indigenous people should be recognized and protected by laws and regulations?

a) Customary rights should NOT be neither recognized, nor protected. Other property rights exist and only them should prevail	b) Customary rights should be recognized and protected the same way other property rights are recognized and protected	c) Customary rights should be recognized and protected above other rights, as they are the only legitimate rights over NR
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24. In the Municipality / Territory where you are working, in addition to laws and regulations, are there any informal rules for NRM (for instance, at community level)?

- a) No
- b) Yes

25. If informal rules exist, how much do you agree with the following statement: informal rules for NRM are the product of inconsistencies of laws and regulations?

a) I strongly disagree.	b) I disagree.	c) I don't have opinion	d) I agree.	e) I strongly agree.
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26. If informal rules exist, how much do you agree with the following statement: informal rules for NRM are consistent with laws and regulations?

a) I strongly disagree. Informal rules and laws and regulations are always in conflict	b) I disagree. They are mostly in conflict	c) I don't have opinion	d) I agree. They are mostly consistent	e) I strongly agree. They are always consistent
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27. How much do you agree with the following statement: laws and regulations for NRM are consistent with other sectorial policies (such as agricultural production policies, transport, energy policies, etc.)?

a) I strongly disagree. NRM policies and other sectorial policies are always in conflict	b) I disagree. They are mostly in conflict	c) I don't have opinion	d) I agree. They are mostly consistent	e) I strongly agree. They are always consistent
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28. Do you know any mechanism for intersectoral coordination?

- a) Yes, there are official mechanisms and they are covering intersectoral coordination comprehensively
- b) Yes, there are official mechanisms for intersectoral coordination, but they are not comprehensive
- c) No, there is no official mechanism, but there are some informal mechanisms that are at work
- d) No, there is no mechanism at all

29. How much do you agree with the following statement: laws and regulations for NRM serve both genders, i.e. men and women, equally?

a) I strongly disagree. They are always favoring men	b) I disagree. They are often favoring men	c) I don't have opinion	d) I agree. They are often serving equally both genders	e) I strongly agree. They are always equitable for both genders
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30. How much do you agree with the following statement: laws and regulations for NRM are generally fair?

a) I strongly disagree. They are always unfair	b) I disagree. They are often unfair	c) I don't have opinion	d) I agree. They are often fair	e) I strongly agree. They are always fair
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31. If they are unfair, Do you think that they are unfair against:

*Multiple answers are possible*

- a) Men
- b) Women
- c) Elders
- d) Youth
- e) Indigenous people
- f) Mestizos
- g) Smallholders
- e) Large-scale tenants
- f) Other (specify):

32. If they are unfair, the group(s) affected by unfairness has less access to NR?

- a) No
- b) Yes

33. If they are unfair, the group(s) affected by unfairness hves less rights over NR?

- a) No
- b) Yes

34. If they are unfair, the group(s) affected by unfairness use less NR?

- a) No
- b) Yes

35. How much do you agree with the following statement: NRM is effectively decentralized?

a) I strongly disagree. Policies don't mention decentralization.	b) I disagree. While policies mention decentralization, it is not effective	c) I don't have opinion	d) I agree. Decentralization is partly effective	e) I strongly agree. Decentralization is complete and at work.
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36. How much do you agree with the following statement: decentralization is best for NRM?

a) I strongly disagree. Centralization of NRM is the best.	b) I disagree. Sometimes, centralization is better than decentralization for NRM	c) I don't have opinion	d) I agree. Often, decentralization is better than central management for NRM	e) I strongly agree. Decentralization is always the best.
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37. How much do you agree with the following statement: mandates and responsibilities of the state agencies engaged in NRM are correctly defined?

a) I strongly disagree. They are poorly defined	b) I disagree. They are sometimes poorly defined	c) I don't have opinion	d) I agree. They are mostly well defined	e) I strongly agree. They are always well defined
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38. How much do you agree with the following statement: the state agencies engaged in NRM are mutually supportive?

a) I strongly disagree. They are never supportive one with another	b) I disagree. They are sometime supportive	c) I don't have opinion	d) I agree. They are often supportive	e) I strongly agree. They are always supportive
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39. How much do you agree with the following statement: mandates and responsibilities of the state agencies engaged in NRM are consistent between the central and the local levels?

a) I strongly disagree. They are always in conflict	b) I disagree. They are sometimes in conflict	c) I don't have opinion	d) I agree. They are mostly consistent	e) I strongly agree. They are always consistent
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40. How much do you agree with the following statement: state agencies engaged in NRM at the central and at the local levels are mutually supportive?

a) I strongly disagree. They are never supportive one with another	b) I disagree. They are sometime supportive	c) I don't have opinion	d) I agree. They are often supportive	e) I strongly agree. They are always supportive
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41. Do you know any official mechanism for citizen participation in the elaboration of laws and regulations related to NRM?

a) No, there is no such mechanism	b) There are some mechanisms, but they are not at work	c) I don't have opinion	d) There are some mechanisms, but they are not very effective	e) There are some mechanisms and work very well
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42. If participation mechanisms exist, please give some details about a case of citizen participation in the elaboration of a law/regulation that you know

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43. Do you think that the citizens that are affected by NRM laws and regulations can effectively influence decision making for NRM?

a) No, I don't think they can influence decision making	b) They can rarely influence decision making	c) I don't have opinion	d) They can sometimes influence decision making	e) They can always influence decision making
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44. How often do you think that civil society participates in decision making for NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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45. How often do you think that women participate in decision making for NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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46. How often do you think that farmers participate in decision making for NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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47. How often do you think that indigenous people participate in decision making for NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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48. How often do you think that the private sector participate in decision making for NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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49. How often do you think that the authorities support access to information related to NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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50. How often do you think that the authorities support public debate related to NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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51. How often do you think that the state agencies engaged in NRM are sanctioned in case of failures to meet their obligations to disclose information related to NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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52. How often do you think that the state agencies engaged in NRM provide publically quality information related to NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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53. How often do you think that the state agencies engaged in NRM provide publically comprehensive information regarding NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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54. How often do you think that the state agencies engaged in NRM provide publically accessible information regarding NRM?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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55. How much do you agree with the following statement: allocation of forestry/mining concessions, permits, and user rights are transparent and free of corruption?

a) I strongly disagree. There is always corruption or traffic of influence.	b) I disagree. There is often corruption of traffic of influence	c) I don't have opinion	d) I agree. There is rarely corruption or traffic of influence	e) I strongly agree. They are always free of corruption and transparent.
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56. How much do you agree with the following statement: private firms/corporate entities and businesses using NR function in an open and transparent manner with adherence to laws and regulations?

a) I strongly disagree. There is always corruption or traffic of influence.	b) I disagree. There is often corruption of traffic of influence	c) I don't have opinion	d) I agree. There is rarely corruption or traffic of influence	e) I strongly agree. They are always free of corruption and transparent.
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57. How often do you think that external monitors and evaluators of state agencies (engaged in NRM)' activities independent of the people whose activities they monitor?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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58. How much do you agree with the following statement: the state agencies engaged in NRM are free from political interference?

a) I strongly disagree. There is always political influence	b) I disagree. There is often political influence	c) I don't have opinion	d) I agree. There is rarely political influence	e) I strongly agree. They are always free of political influence.
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59. Do you think that political appointees fill positions in your organization because they are active members of a political party?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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60. Do you think that budgets related to NRM are adequate to the needs?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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61. Do you think that budgets related to NRM are revised according to the needs?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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62. Do the protected areas located in the Municipality(ies)/Territory where you work have a valid management plan?

a) None of them	b) Few of them	c) Some of them	d) Most of them	e) All of them
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63. If protected areas have a management, plan, please specify when and by whom plans have been elaborated

Name of the plan	Date	Organization

64. Do the Municipality(ies)/Territory where you work have a valid environmental plan?

a) None of them	b) Few of them	c) Some of them	d) Most of them	e) All of them
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65. If they have an environmental, plan, please specify when and by whom plans have been elaborated

Name of the plan	Date	Organization

66. Do the Municipality(ies)/Territory where you work have a valid territorial ordering plan?

a) None of them	b) Few of them	c) Some of them	d) Most of them	e) All of them
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67. If they have a territorial ordering plan, please specify when and by whom plans have been elaborated

Name of the plan	Date	Organization

68. Do you think that the goals of the National Development Strategy of your country is widely disseminated to the staff of NR-related state agencies/ government at all levels?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

69. Do you think the NR-related state agencies' staff/local authorities' staff in charge of NRM have qualifications that match with their mandates and responsibilities?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

70. Do you think that salaries and benefit packages for NR-related agencies/government staff in charge of NRM are adequate to attract and retain competent staff?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

71. Do you think that NR-related agencies' staff/local authorities' staff in charge of NRM, in particular the field technicians have the capacity to oversee the areas assigned to them?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

72. Do the NR-related agencies/local authorities in charge of NR management record and report their management activities?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

73. Do you think that the NR-related agencies/local authorities in charge of NR management appropriately access information technology (e.g., computers, software, GPS, GIS) to carry out their mandates and responsibilities?

- a) They are 50 years behind the times, with no modern technology or qualified people to use it.
- b) They have a serious lack of appropriate technology or staff trained to use it.
- c) They have access to technology, but not enough to do their jobs well They need more or better technology and staff trained to use it.
- d) They have good technology, appropriate to their needs, and qualified staff to use it.

74. Do you know any mechanism to analyze the impacts of public programmes/projects related to NRM?

a) I don't know any.	b) There are mechanisms in theory, but they are not at work	c) There are mechanisms, but they do not work systematically	d) There are mechanisms, but the results of the analysis are not used to provide feedback when designing new programmes/projects	e) There are mechanisms and they work
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75. Do you think that local taxes related to use and access of NR are effectively collected?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

76. Do you think that local taxes related to use and access of NR are fairly redistributed?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

77. Do you think that the NR-related state agencies/local authorities in charge of NRM effectively implement the NR-related laws and regulations?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

78. If the answer is Never of Rarely, please explain why not?

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79. Do public spending related to NRM are publically available?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
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80. Do you think that sanctions for NR crimes fit the gravity of the offense?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**81.** Do you think that sanctions for NR crimes are fairly applied?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**82.** How often do you think that the strategies to implement laws and regulations for NRM include effective measures for prevention of NR crimes?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**83.** How often do you think that the strategies to implement laws and regulations for NRM include effective means for detection of NR crimes?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**84.** How often do you think that the strategies to implement laws and regulations for NRM include effective means for suppression of NR crimes?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**85.** How often do you think that incentives for NR-related agencies' and official staff to enforce NRM policies are sufficient?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**86.** How often do you think that reports of serious NR-related crimes are sufficiently investigated?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**87.** Do you think that local prosecutors and judges have the capacity to effectively deal with cases of NR-related crimes?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**88.** Do you think that local prosecutors and judges are willing to effectively deal with cases of NR-related crimes?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**89.** Do you think that local prosecutors dealing with cases of NR-related crimes are financially accessible?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**90.** Do you think that local prosecutors dealing with cases of NR-related crimes are fair?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**91.** Do you think that local prosecutors dealing with cases of NR-related crimes are independent?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**92.** Do you think that the decisions of prosecutors and judges are effectively enforced, as stipulated by law?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**93.** In the Municipality(ies)/Territory where you work, do you think that property boundaries are clearly surveyed and demarcated on the ground?

	State land	Private land	Communal lands	Others
a) Properties are registered and demarcated everywhere				
b) Properties are registered and demarcated in most of places				
c) Properties are registered and demarcated in few places.				
d) Properties are not registered nor demarcated at all.				
e) Properties are registered, but not demarcated				

**94.** Can an individual, including a person from outside the community, readily identify who holds rights over land and other NR?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

**95.** Do you think that property rights records transparent and free of corruption / traffic of influence?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

96. In the Municipality(ies)/Territory where you work, how often do you think that there are conflicts over NR between the State and community people?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

97. In the Municipality(ies)/Territory where you work, how often do you think that there are conflicts over NR within community people?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

98. In the Municipality(ies)/Territory where you work, do conflicts over NR tend to persist or do they get resolved?

a) Conflicts tend to persist indefinitely	b) Conflicts get resolved (or resolve by themselves) slowly, imperfectly, or at great expense	c) The resolution of conflicts is variable: some are resolved efficiently while others persist	d) There are punctual conflicts that get quickly and efficiently resolved
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99. In the Municipality(ies)/Territory where you work, are there any informal ways of resolving conflicts over NR?

a) No, informal ways are not used at all	b) Rarely, Informal ways have limited use	c) There are informal ways that are socially acceptable and widely used
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100. Do you think that the NR-related agencies' /local official staff in charge of NRM have an effective code of conduct to explicitly address corruption / bribery / traffic of influence?

a) No, they don't have any code.	b) They have a code, but it is not adequate	c) They have a code of conduct, but it is not effective	d) They have a code which is partially effective	e) They have an effective code of conduct
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101. Do you think that citizens have mechanisms/opportunities report corrupt practices bribery / traffic of influence to the appropriate authorities?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

102. Do you think complaints of alleged corruption / bribery / traffic of influence lead to investigation and appropriate sanctions?

a) Never	b) Rarely	c) Sometimes	d) Often	e) Always
----------	-----------	--------------	----------	-----------

REVISED FORM “O” IFRI PROTOCOL (GENERAL INFORMAL ON THE SITE) AND FORM “F” IFRI PROTOCOL (THE FOREST)

*Form to apply to a key informant (local leader, etc.)*

Name of the site:

Date of the interview (day, month, year):

Name of the informant (optional):

Position of the informant:

Age of the informant:

1. Characteristics of the site

**WHAT ARE THE KEY ELEMENTS OF THE HISTORY OF THE SITE SINCE ITS CREATION?**

*Indicate approximately since when the community was founded, the origin of the population, the major trends of accessing land, of cultivating (core agrarian dynamics), of using natural resources, and the major characteristics of the institutional environment, etc.*

**COLLECT A SPATIAL MAP OF THE SITE**

*in the case no map exist, please draw a map with the informant*

- Limits of the site (different communities) and neighbors (conflicts? Why?)
- Infrastructures (school, church, roads, health center, market/sales, community house, administrative center, => all the interest points for community people)
- Rivers
- Forests and different forest sub-areas (area for Wood extraction, for collection of medicinal plants, fruits, hunting area, etc.)
- If applicable, areas with different land tenures and areas under management plans
- Agricultural lands, pastures (indicate if pasture and farming in the forest areas)
- Sacred lands
- Settlement / housing area

Etc.

2. Characteristics of the forest

	<b>WHAT IS THE CONDITION OF THE FOREST</b>  (1) Natural primary (old-growth) forest (2) Natural secondary forest, which has regrown naturally over time following clearance (3) Forest plantation	<b>HAVE THERE BEEN ANY HUMAN EFFORTS TO PLANT NEW TREES AMONG EXISTING OLD TREES?</b>  (0) No (1) Yes	<b>HAS THERE BEEN ANY REFORESTATION/IMPROVEMENT PROJECT(S) RELATED TO THIS FOREST?</b>  (0) No (1) Yes
Latifoliar			
Conifers			
Mangroves			

**WHAT IS THE SIZE OF THE FOREST? \_\_\_\_\_ (HECTARES)**

**IF THE AREA IS NOT KNOWN IN HECTARES, SUPPLY THE (LOCAL) UNIT OF MEASUREMENT HERE. \_\_\_\_\_**

**HAS THIS FOREST BEEN DIVIDED INTO FOREST MANAGEMENT UNITS?**

*Mark only one answer.*

- (0) No  
(1) Yes

**IF YES, HOW MANY?**

**WHAT IS THE TOPOGRAPHY OF THE LAND ON WHICH THIS FOREST IS LOCATED?**

*Mark only one answer.*

- (1) Primarily flat  
 (2) Mostly flat with some rolling terrain  
 (3) Primarily rolling terrain  
 (4) Mostly rolling terrain with some steep portions  
 (5) Primarily steep

**WHAT IS THE LEGAL DESIGNATION OF THE FOREST?**

*Mark all that apply*

- (1) Community forest  
 (2) Private forest  
 (3) Protected area  
 (4) State forest (not protected)  
 (5) Other (specify)

--

**WHO IS THE LEGAL OWNER OF THE FOREST LAND?**

*Mark only one response.*

- (1) The State
- (2) Private owner (with legal document)
- (3) Private owner (without legal document)
- (4) A community (indigenous)
- (5) Free Access without identified owner

**WHO IS RIGHTS HOLDER ON ALL OF THE FOREST RESOURCES FROM THIS FOREST?**

- (1) The owner of the forest land
- (2) Another owner (specify)
- (3) The Municipality
- (4) The State
- (5) Other (specify)

--

**HAS THE DENSITY OF TREES ON THE FOREST LAND CHANGED IN THE PAST FIVE YEARS?**

*Mark only one answer.*

- (1) It has decreased
- (2) It has increased
- (3) It has remained the same

**HAS THE DENSITY OF SHRUBS AND BUSHES ON THE FOREST LAND CHANGED IN THE PAST FIVE YEARS?**

*Mark only one answer.*

- (1) It has decreased
- (2) It has increased
- (3) It has remained the same

**. HAS THE DENSITY OF THE GROUND COVER ON THE FOREST LAND CHANGED OVER THE PAST FIVE YEARS?**

*Mark only one answer.*

- (1) It has decreased
- (2) It has increased
- (3) It has remained the same

**IF THE FOREST AREA HAS INCREASED, IT IS PRIMARILY BECAUSE OF?**

*Mark only one answer.*

- (1) Internal/local efforts
- (2) External efforts
- (3) Both internal and external efforts

**IF THE FOREST AREA HAS DECREASED, IT IS PRIMARILY BECAUSE OF?**

*Mark only one answer*

- (1) Overuse/degradation of forest products
- (2) Encroachment for agriculture
- (3) Encroachment by non-agricultural processes (e.g. urbanization, residential)
- (4) Natural disasters



(5) Other (plain text):

### 3. Rules and norms of Access and use of NR

#### WHAT ARE THE RULES THAT REGULATE ACCESS AND USE OF NATURAL RESOURCES, IN PARTICULAR LAND AND FOREST RESOURCES?

Rules	(1) No; (2) Yes	(1) Formal; (2) Informal; (3) Both	Who elaborate the rule? (1) Central Government; (2) Local authorities; (3) Local leaders; (4) Others (specify)	¿Who implement the rule (sanctions)? (1) Central Government; (2) Local authorities; (3) Local leaders; (4) Others (specify)
Road construction				
Quantity of resources that can be used (fruits, seeds, charcoal, firewood, medicinal plants, wildlife, etc.)				
Localization of use of NR in the forest				
Time of use of NR during the year				
Characteristics of NR to use (size, age, maturity, species, etc.)				
Type of plant or seed that can be planted				
Fire control (if/where/when)				
Type of transportation to extract or access NR				
Type of technology to use NR (chemicals, specific equipment, etc.)				
Type of processing of the NR				
Destination of the products (family consumption, market)				
Other (specify)				

**DURING THE LAST YEARS, HAVE THESE RULES AND NORMS BEEN CHANGED?**

*If "yes", specify who promoted the change.*

Change	(0) No (1) Yes	Who promoted the change? (1) Local authorities; (2) Central Government; (3) other
Restriction of forest access		
Prohibition of collection forest products		
Ousting of population		
Community members lost their rights to manage forest resources		
Community members lost their rights to use NR of the forest		
Community members recovered their rights to use NR of the forest after a time of prohibition		
Community members gain rights to manage forest resources		
Transfer of management rights to community people		
Increase of implementation of rules		
Introduction of new sanctions against forest crimes		
Introduction of limits/quotas related to the use of forest products		
Development of a forest management plan		
Renting the forest to other users		
Establishment of mechanisms of redistribution of ecosystem services payments		
Change of the legal statute of the forest Please explain		
Other Please explain		

**HOW DID THESE CHANGE AFFECT COMMUNITY PEOPLE?**

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**FROM YOUR STANDPOINT, WHAT DOES PARTICIPATION MEANS TO YOU?**

**DID COMMUNITY MEMBERS PARTICIPATE IN ELABORATING ANY OF THE RULES RELATED TO ACCESS AND USE OF FOREST?**

*Mark only one answer*

- (1) They did not participate at all
- (2) 10% participated
- (3) Less than 50% participated
- (4) Between 50 and 80% participated
- (5) 100% of community members participated

**IN PARTICULAR, DID WOMEN PARTICIPATE IN ELABORATING ANY OF THE RULES RELATED TO ACCESS AND USE OF FOREST?**

*Mark only one answer*

- (1) They did not participate at all
- (2) 10% participated
- (3) Less than 50% participated
- (4) Between 50 and 80% participated
- (5) 100% of women participated

**IN PARTICULAR, DID THE YOUTH PARTICIPATE IN ELABORATING ANY OF THE RULES RELATED TO ACCESS AND USE OF FOREST?**

*Mark only one answer*

- (1) They did not participate at all
- (2) 10% participated
- (3) Less than 50% participated
- (4) Between 50 and 80% participated
- (5) 100% of the youth participated

- 4. Institutions intervening in the forest / related to the resources of this forest

**WHO ARE THE STAKEHOLDERS / WHAT ORGANIZATION INTERVENE IN THE COMMUNITY?**

Stakeholder / organization	Key (No/Yes)	Why? Why not?

## REVISED FORM "S" IFRI PROTOCOL – THE COMMUNITY

*Form to apply in each of the communities (=settlements) of the site*

*=> to apply to someone that knows well the community, its history, and the socio-economic characteristics (local leader, elder, etc.)*

Date of the interview (day/month/year):

Name of the community:

### 1. History of the community

#### **WHAT ARE THE KEY ELEMENTS OF THE HISTORY OF THE COMMUNITY SINCE ITS CREATION?**

*Indicate approximately since when the community was founded, the origin of the population, the major trends of accessing land, of cultivating (core agrarian dynamics), of using natural resources, and the major characteristics of the institutional environment, etc.*

2. Social characteristics of the community

HOW MANY HOUSES THE COMMUNITY IS CURRENTLY COUNTING? \_\_\_\_\_

HOW MANY PERSONS USUALLY LIVE IN A HOUSE IN THE COMMUNITY? \_\_\_\_\_

WHERE DO THE COMMUNITY PEOPLE USUALLY BUY BASIC PRODUCTS (FOOD, CLOTHS, ETC.) AND SELL THEIR FARM PRODUCTS?

	Distance (indicate the unit)	Time (indicate the type of transportation))
In the community		
In other neighboring communities		
In the closest town		
<b>WHO ARE THE FARMERS THAT COMMERCIALIZE FARM PRODUCTS IN THE COMMUNITY</b> <i>Specify for each type of farm product the use (self-consumption, commercialization, processing, etc.) and the localization of use (in the community, out of the community)</i>	<b>HOW MANY FAMILIES OF THIS COMMUNITY ARE ENGAGED IN COMMERCIALIZING THESE PRODUCTS?</b>	

IF A MEMBER OF THIS COMMUNITY WANTS TO REALIZE AN ADMINISTRATIVE PROCEDURE: WHERE DOES HE/SHE HAS TO GO? HOW FAR OR HOW MUCH TIME DOES HE/SHE NEEDS FROM THE COMMUNITY TO GO TO THIS PLACE?

Type of procedure	Ministry of agriculture	State agency in charge of the forest sector	Ministry of Environment	Police	Municipal authorities	Local / community authorities (leaders)								Distance (indicate the unit)	Time ((indicate the type of transportation)
Related to forestry															
Related to farming															
Related to fishing															
Related to certification of products															
Etc.															

**HOW OFTEN DO THE COMMUNITY MEMBERS USUALLY INTERACT WITH THE AUTHORITIES?***Mark only one answer*

	Never	Rarely	Sometimes	Regularly	Frequently
Municipal authorities					
Local leaders / community authorities					
Ministry of agriculture					
State agency in charge of the forest sector					
Ministry of Environment					
Etc.					

**WHAT ARE THE ETHNIC GROUPS IN THIS COMMUNITY?***Make an estimate of the percentage of each group in the population of this community*

Ethnic group	% of the population of the community

**WHAT ARE THE DIFFERENT RELIGIOUS GROUPS IN THIS COMMUNITY?***Make an estimate of the percentage of each group in the population of this community*

Religious group	% of the population of the community

**3. Economic conditions in the community****HOW CAN YOU QUALIFY RICHNESS (I.E. PEOPLE THAT CORRECTLY LIVE) IN THE COMMUNITY?****HOW MANY FAMILIES IN THE COMMUNITY COULD BE IN THIS SITUATION****HOW CAN YOU QUALIFY POVERTY (I.E. PEOPLE THAT LIVE BADLY) IN THE COMMUNITY?**

## HOW MANY FAMILIES IN THE COMMUNITY COULD BE IN THIS SITUATION

WHAT ACTIVITIES DEVELOP THE COMMUNITY MEMBERS? <i>Multiple responses possible</i>	PRIORITIZE THE RESPONSES IN TERMS OF INCOME GENERATION
1/ Agriculture	
2/ Cattle breeding	
3/ Forest activities (extraction)	
4/ Self-employment (commercialization, mechanical workshops, bakery, etc.)	
5/ Non-agricultural work (teacher, state officer, doctor, etc.)	
6/ Activities in migrations	
7/ Other (specify)	

## HOW MANY FAMILIES HAVE CATTLE IN THE COMMUNITY?

## HOW MANY FAMILIES ACCESS A PLOT OF AGRICULTURAL LAND IN THE COMMUNITY?

## HOW BIG ARE THE AGRICULTURAL PLOTS?

*Give a range of size in ha*

## HOW COMMUNITY MEMBERS ACCESS LAND IN THE COMMUNITY?

	Tenure	Number of families in this situation
Legal access	Private properties	
	Land reform	
	Collective properties (among which indigenous communal properties)	
Illegal access	Squat without agreement	
	Squat with informal agreement	

## HOW FAMILIES IN THIS COMMUNITY USE FOREST RESOURCES TO SATISFY THEIRS BASIC NEEDS IN.... ?

Need	%
Food	
Forages	
Firewood	
Wood for housing	
Biomass, agricultural inputs	
Other needs	



**WHAT IS THE MAIN ENERGY SOURCE FOR THE MAJORITY OF FAMILIES IN THE COMMUNITY?***Mark only one response.*

- (1) Forest products (charcoal, firewood, etc.)
- (2) Hydric, wind, solar energy
- (3) Electricity
- (4) Gas, petrol
- (5) Other (specify)

**4. Rules and Norms for accessing and using natural resources in the community****WHAT ARE THE RULES AND NORMS RELATED TO NR ACCESS AND USE IN THE COMMUNITY?**

Rule / norm	(0) No; (1) Yes	(1) Formal (specify); (2) Informal	Who establish the rule / norm?	Who implement the rule / norm?
Restricting access to land				
Regulation of land use Related to agriculture Related to cattle breeding Related to forestry Related to hunt Related to sacred land Related to conservation Related to road Other (specify)				
Restriction of access to other NR Water / river Metals (gold, etc.) Wild plants Wild animals Other (specify)				
Regulation of use of other NR By destination (self-consumption, commercialization)  By localization  By season / time  Other (specify)				

**DURING THE LAST FIVE YEARS, WERE THE MEMBERS OF THE COMMUNITY INVOLVED IN CONFLICTS REGARDING THE ACCESS AND/OR USE OF NATURAL RESOURCES WITHIN THE COMMUNITY?**

*Mark only one answer*

- (0) No
- (1) Yes

**IF THE ANSWER IS “YES”: WHAT KIND OF CONFLICT?**

**DURING THE LAST FIVE YEARS, WERE THE MEMBERS OF THE COMMUNITY INVOLVED IN CONFLICTS REGARDING THE ACCESS AND/OR USE OF NATURAL RESOURCES WITH OTHER COMMUNITIES?**

*Mark only one response*

- (0) No
- (1) Yes

**IF THE ANSWER IS “YES”: WHAT KIND OF CONFLICT?**

**DURING THE LAST FIVE YEARS, WOULD YOU SAY THAT THE LEVEL OF CONFLICTS RELATED TO NR HAS....?**

*Mark only one response*

- (1) Increased
- (2) Been the same
- (3) Dropped

**DURING THE LAST FIVE YEARS, WOULD YOU SAY THAT THE LEVEL OF CONFLICTS RELATED TO NR HAS....?**

*Mark only one response*

- (1) Disturbed a lot normal activities in the community;
- (2) Disturbed some of the normal activities in the community;
- (3) Not disturbed anything in the community.

**WHO ARE THE STAKEHOLDERS / WHAT ORGANIZATION INTERVENE IN THE COMMUNITY?**

Stakeholder / organization	Key (No/Yes)	Why? Why not?

REVISED FORM "A" IFRI PROTOCOL- THE FOREST ASSOCIATION

*Form to apply to representatives of forest associations*

Date of the interview (day/month/year)

Name of the Forest association:

Name of the community(ies) where the forest association operates:

1. Characteristics of the Association

**WHAT ARE THE KEY ELEMENTS OF THE HISTORY OF THE FOREST ASSOCIATION SINCE IT WAS CREATED?**

**WHO INITIATED THE INITIAL FORMATION OF THE FOREST ASSOCIATION?**

***MULTIPLE ANSWERS MAY BE APPLICABLE***

- (1) Community people
- (2) Local authorities
- (3) Territorial/ Regional / Departmental authorities
- (4) National Government
- (5) NGO
- (6) External cooperation
- (7) Other (specify)

**WHO CAN BE MEMBER OF THE FOREST ASSOCIATION?**

--

**WHAT ARE THE REQUIREMENTS TO BE MEMBER OF THE ASSOCIATION?**

--

**WHAT ARE THE RULES THAT REGULATE ACCESS AND USE OF NATURAL RESOURCES, IN PARTICULAR LAND AND FOREST RESOURCES?**

Rules	(1) No; (2) Yes	(1) Formal; (2) Informal; (3) Both	Who elaborate the rule? (1) Central Government; (2) Local authorities; (3) Local leaders; (4) Others (specify)	¿Who implement the rule (sanctions)? (1) Central Government; (2) Local authorities; (3) Local leaders; (4) Others (specify)
Road construction				
Quantity of resources that can be used (fruits, seeds, charcoal, firewood, medicinal plants, wildlife, etc.)				
Localization of use of NR in the forest				
Time of use of NR during the year				
Characteristics of NR to use (size, age, maturity, species, etc.)				
Type of plant or seed that can be planted				
Fire control (if/where/when)				
Type of transportation to extract or access NR				
Type of technology to use NR (chemicals, specific equipment, etc.)				
Type of processing of the NR				
Destination of the products (family consumption, market)				
Other (specify)				

**IF SOME RULES HAVE BEEN ESTABLISHED BY THE ASSOCIATION, HOW ARE THEY ENFORCED? ARE THEY ENFORCED BY?**

*Multiple answers may be applicable*

- a) Men
- b) Women
- c) Elders
- d) Youth
- e) Indigenous people
- f) Non indigenous people (specify)
- g) Others (specify))

--

**2. Governance structure of the forest association**

**IN TERMS OF PARTICIPATION IN THE EXECUTIVE BOARD OF THE ASSOCIATION, DO YOU THINK THAT MEMBERS ARE REPRESENTATIVE OF THE COMMUNITY PEOPLE REGARDING THE FOLLOWING CRITERIA**

*multiple answers may be applicable*

Criteria	Mark (0) for NO, not representative; and (1) for YES, representative
Education	
Income level	
Ethnicity	
Cast	
Gender	
Political party	

**CAN THE ASSOCIATION'S EXECUTIVE BOARD BE SANCTIONED OR REMOVED FROM OFFICE FOR POOR PERFORMANCE?**

*Multiple answers may be applicable*

- (0) No
- (1) Yes

**HOW OFTEN IS THE EXECUTIVE BOARD ELECTED?**

*Only one answer may be applicable*

- (1) Once each year
- (2) Once every 2-3 years
- (3) Once every 4-5 years
- (4) Once, more than 5 years
- (5) Never

**ARE MEETINGS HELD IN WHICH ALL MEMBERS OF THE FOREST ASSOCIATION ARE ELIGIBLE TO PARTICIPATE?**

*Only one answer may be applicable*

- (0) No.
- (1) Yes

### IF 'YES', HOW FREQUENTLY ARE THESE MEETINGS ORGANIZED?

*Only one answer may be applicable*

- (1) Once per month
- (2) Once every 3-6 months
- (3) Once a year
- (4) Once, more than every year
- (5) NA

**IF 'YES', HOW WOULD YOU QUALIFY THE PARTICIPATION OF MEMBERS IN THESE MEETINGS (%)?**

- (1) 50% or less
- (2) 51% - 80%
- (3) 81% - 100%

**ARE FINANCIAL RECORDS MAINTAINED BY THE ASSOCIATION?**

*Only one answer may be applicable*

- |     |     |
|-----|-----|
| (0) | No  |
| (1) | Yes |

**IF FINANCIAL RECORDS ARE MAINTAINED, ARE THEY AVAILABLE FOR EXAMINATION BY OTHERS?**

*Only one answer may be applicable*

- |     |     |
|-----|-----|
| (0) | No  |
| (1) | Yes |

**IF THERE ARE FINANCIAL RECORDS, HOW OFTEN ARE THEY PRESENTED TO THE ASSOCIATION MEMBERS??**

- (0) Once a month
- (1) Once every 3-6 months
- (2) Once a year
- (3) Less than once a year

**ARE THE ACTIVITIES OF THE ASSOCIATION SUPERVISED BY A HIGHER ORGANIZATION?**

*Only one answer may be applicable*

- |     |     |
|-----|-----|
| (0) | No  |
| (1) | Yes |

**¿ DO ASSOCIATION MEMBERS RECEIVE ANY KIND OF COMPENSATION?**

*Multiple answers may be applicable*

- (1) No, they don't receive any compensation.
- (1) Yes. They are paid in cash through formal fines or funds collected by the association
- (2) Yes, they receive in kind compensation (in NR products) from the association
- (3) Yes. They are paid through funds received by an external source
- (4) Yes. They receive compensation through bribes they receive from individuals caught illegally harvesting forest products

**IF THERE IS ANOTHER TYPE OF BENEFIT, PLEASE EXPLAIN**

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**HOW CAN SOMEONE BE PART OF THE ASSOCIATION BOARD?**

*Only one answer may be applicable*

- (1) By election
- (2) By appointment
- (3) By lots
- (4) By rotation

**HAVE WOMEN EVER BEEN A MEMBER OF BOARD OF THE ASSOCIATION?**

*Only one answer may be applicable*

- (1) No
- (2) Yes

**ON AVERAGE, OVER THE PAST FIVE YEARS, WHAT IS THE MOST IMPORTANT FINANCIAL SOURCE FOR THE FOREST ASSOCIATION?**

*Only one answer may be applicable*

- (1) Voluntary contribution of funds
- (2) Membership fee
- (3) Payments that substitute for labor input
- (4) Fines
- (5) National or regional government
- (6) Development agency
- (7) Sales of forest products from the forest
- (8) Own taxes
- (9) Special levies
- (10) Aid from external NGOs
- (11) Aid from local NGOs
- (12) Bilateral cooperation
- (13) Other (specify)

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**IF THE ASSOCIATION DID NOT RECEIVE ANY FUNDS FROM EXTERNAL AGENCIES AND HAD TO RELY ON CONTRIBUTIONS FROM MEMBERS OR ITS USER GROUP, OR OTHER FUNDS RAISED LOCALLY, COULD IT SUPPORT ALL ITS EXPENDITURES?**

*Only one answer may be applicable*

- (1) No, it could not meet its expenses if no funds were received from external sources.
- (2) Yes, it could support expenditures with a combination of sales of products and contributions from members
- (3) Yes, it could support itself by sales from forest products.
- (4) Yes, it could support its expenditures by contributions from members alone.

## GUIDE TO IDENTIFY AND CHARACTERIZE RULES OF ACCESS AND USE OF NATURAL RESOURCES AT COMMUNITY LEVEL

**Time objective for the participative workshop between 2:30 – 3 hours**

**Opening prayer (3 min)**

**Presentation of the team and the objectives of the study (10 min)**

**Questions from the community people (3 min)**

**Distribution of the community people into 3 groups, and organization of group works with one animator (60 – 90 min) – spatial and stakeholders maps, list of NR and rules**

**Coffee break (10 min)**

**Plenary work for discussion of the inter-relation between group-works (30 min)**

**Final discussion (5-10 min)**

**Lunch**

### **MAPPING THE COMMUNITY (IN PARALLEL OF REALIZING A STAKEHOLDER MAP AND A LIST OF NATURAL RESOURCES)**

Identify:

- Limits of the community and neighbors (conflicts? Why?)
- Infrastructures (school, church, roads, health center, market/sales, community house, administrative center, => all the interest points for community people)
- Rivers
- Forests and different forest sub-areas (area for Wood extraction, for collection of medicinal plants, fruits, hunting area, etc.)
- If applicable, areas with different land tenures and areas under management plans
- Agricultural lands, pastures (indicate if pasture and farming in the forest area)
- Sacred lands
- Settlement / housing area

**MAPPING STAKEHOLDERS (IN PARALLEL OF REALIZING A SPATIAL MAP AND A LIST OF NATURAL RESOURCES)**

- In addition to community people, who is working/using natural resources of the community?
- What are they doing?
- What are their interactions with community people, and what are their roles in decision making?

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**REALIZING A LIST OF NATURAL RESOURCES THAT ARE AVAILABLE IN THE COMMUNITY (IN PARALLEL OF MAPPING THE COMMUNITY AND STAKEHOLDERS)**

What are the available/existing natural resources in the community? <i>Specify the Access and Use of these resources</i>	Are the Access and use of these resources regulate in the community? (Yes/No)

**ESTABLISHING RELATIONS BETWEEN THE SPATIAL MAP AND THE LIST OF NATURAL RESOURCES**

- Localization of all the natural resources and uses in every area
- For agricultural lands: (1) differentiation depending on the different sub-zones (types of soils) and in relation with the type of production systems, etc.), (2) ¿what is cultivated? (3) what are the performances of crops (yields?)); (4) what share of production of each crop is self-consumed? What is sold/exchanged? Where is it sold/exchanged?
- For forest lands: (1) differentiation between sub-zones: (exploitation of timber, medicinal plants, hunt, etc.)? (for each of the uses if forest products)

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**ESTABLISHING RELATIONS BETWEEN RESOURCES (THAT ARE REGULATED) AND ACTORS**

RN with regulation (any form of regulation)	Rule from the community? 0/ No, external rule; 1/ yes =internal rule	Any administrative process? 0/ No; 1/ Yes	Sanction? -indicate the level of sanction) 0/ No sanction; 1/ Fee; 2/ confiscate; 3/ community work; 4/ jail 5/ other	Who is applying the sanction?